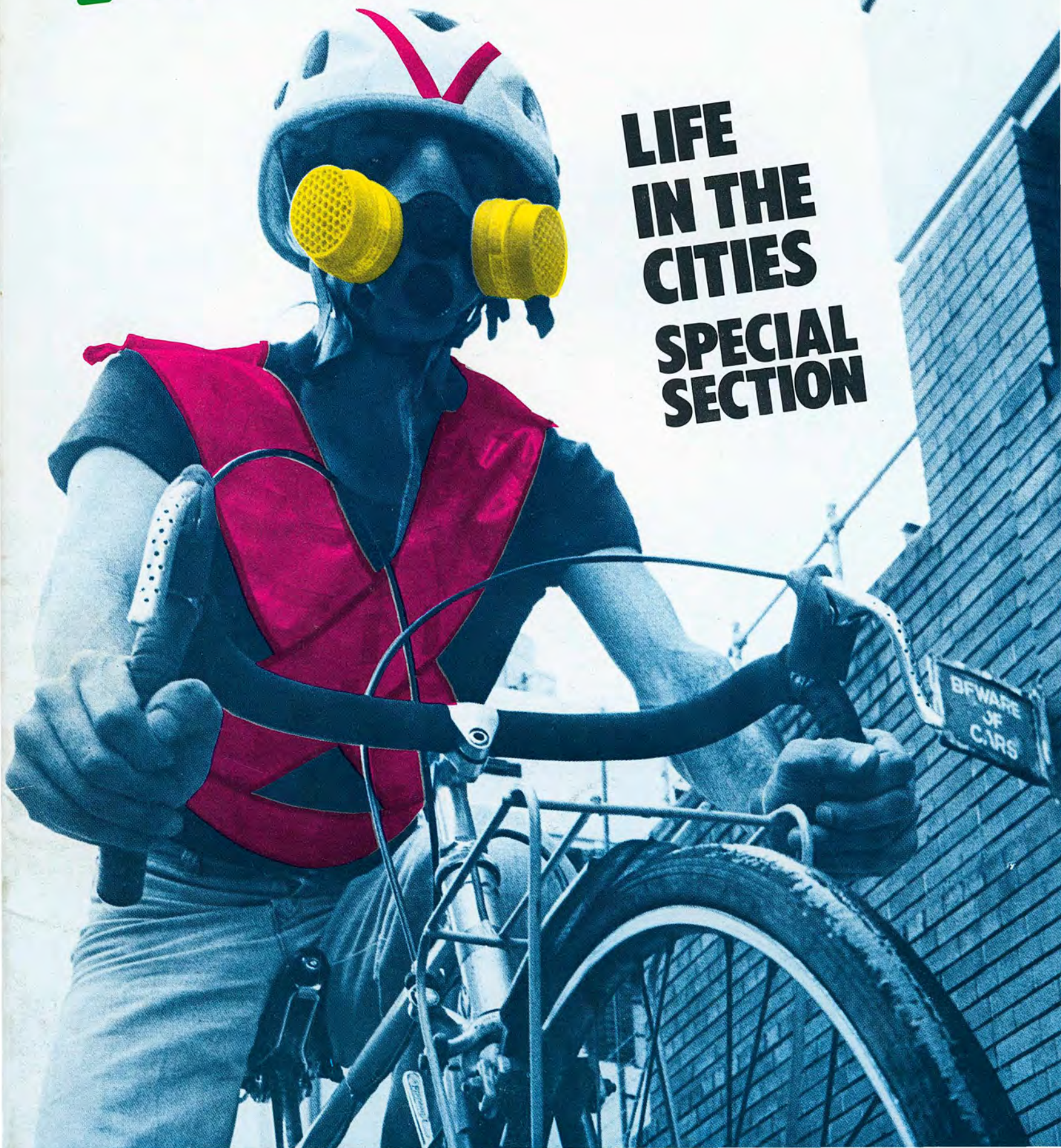


Freewheeling

NUMBER 9 \$2.00*

**LIFE
IN THE
CITIES
SPECIAL
SECTION**



Bicycle touring in Australia gets its 'act' together

We are getting our act together on the bicycle routes. The act in question is Australian Cycle Trails, an organisation which will research, map, produce guides to and lobby for cycle trails which will eventually ring the continent. There will be routes crossing the continent in several places and directions and various shorter routes for specific purposes — historic, scenic or other special reasons. The trails will be commuting routes between the main population centres, touring trails and, of course, some sort of bicentenary celebratory trails. The trails will take in the East Coast Bicycle Route, and its continuation right around the country, following the coast where practicable.

As this issue hits the newsagents and mailboxes around Australia, a group of cyclists who have been involved with the long-distance bicycle touring trails concept will meet to discuss Australian cycle trails and the best ways to bring them about. The job is a long one and it is hoped that progress will be steady, but it will certainly not be fast.

ACT's main function will be to decide on and publicise the routes and then lobby the various councils, road authorities and other government departments for help and funding to improve the routes such as by signposting them and maintaining the surfaces. The idea is not to establish a network of expensive, purpose-built cycleways, but to find roads, preferably with low traffic volume, with pleasant but not boring grades and suitable surfaces, on which cyclists can ride safely, enjoyably and comfortably. Horse riders have their own signposted trails which they have worked out over the years and there is every reason why cyclists should have similar ones.

The routes would offer good scenery, (spectacular where available), pass near sites of historic or tourist interest and would be usable by cyclists of all abilities and ages (two nine-year-olds and one 67-year-old rode the whole 7,000km of the Trans-America bicycle trail). Later activities of the group could include the publication of any guides to bicycling which were needed, such as preparing for your first tour, taking a group on a tour and the provision of services similar to those provided by car associations for their members.



Routes proposed by ACT, though not in any order of completion: 1, The Pacific Coast Cycle Trail, Cooktown to Melbourne via the Coastal Plain and adjacent ranges; 2, The Southern Ocean Cycle Trail, Melbourne to Perth via the coast and the Nullarbor Plain; 3, The Murray River Cycle Trail, following Australia's largest river from source to sea; 4, The Eastern Tablelands Cycle Trail, linking Brisbane with Canberra via the New England and Central Tablelands; 5, The Western Explorers Cycle Trail, tracing the path of the early explorers as they trekked westward from Sydney and southward to Melbourne; 6, The Tasman Cycle Trail, a circular trail around Tasmania, the island state.

Some of the subjects for discussion by cycle trails activists will be the form of the organisation, fund-raising methods, the scales and types of maps and the information to go into them and into guide books, and the criteria for road selection.

It was decided to set up a national organisation as *Freewheeling* cannot handle all of this work on its own. Inputs from many people in all states and territories will save time and energy, improve the quality and range of the routes

and broaden the base of the organisation. Later ACT may organise group rides and tours and offer some sort of route-swapping service — it would supply to cyclists others cyclists' maps and notes for their favourite tours.

One other task which will be taken on is the revival of Recycle Australia, an accommodation swapping list which *Freewheeling* promoted in its early days.

Hold on out there folks, it's all coming together at last.



Australian Cycle Trails

P. O. Box 57 BROADWAY NSW 2007

Freewheeling 9

DECEMBER 1980



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*Cover photograph and photograph this
page by Warren Salomon and Ric Bolzan.*

©1980 Freewheeling Australia Publications
ISSN 0 156 4579

*Cover price is recommended price only. This
magazine is registered for posting Category B.



FREEWHEELING 9

PRODUCTION

PRODUCTION STAFF FOR THIS ISSUE:

Michael Burlace, Amanda Holt, Neil Jones, Wayne Kotzur, Regina Orchard, Warren Salomon, Julie Wiggins.

TYPESETTING: Rat Graffix 660 6605

PRINTING: Panacea Press 211 1089

PUBLISHER: Freewheeling Australia Publications
P. O. Box 57, Broadway NSW

DISTRIBUTION:

Newsagents NSW: Allan Rodney Wright (Circulation) Pty Ltd,
Tel: (02) 357 2588.

Newsagents VIC: Melbourne Wholesale Newsagency Pty Ltd,
Tel: (03) 67 9249.

Newsagents SA: B.G. and K.L. Fuller, (08) 45 9812

Bicycle Shops AUSTRALIA: Outdoor Agencies (02) 699 7698
and Hanley Trading (02) 666 9675.

Articles represent views of the authors and not necessarily those of the publisher.

AUTHORS AND CONTRIBUTIONS: Well-researched articles (preferably accompanied by photos or graphics) are welcomed. The text should be typed double-spaced and photographs should be accompanied by captions. Black and white pictures or negatives are preferred. Touring articles should also come with a clear map of the route described. All contributions will be returned after publication.

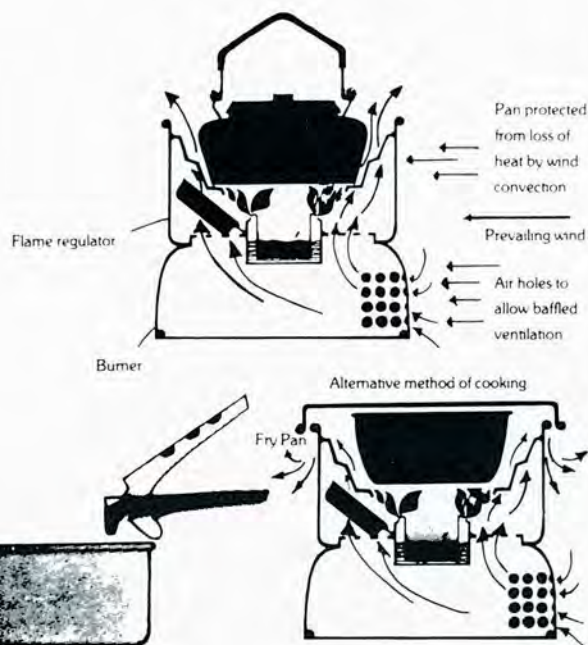
Letters for the readers' column, *Write on* are also welcomed, typed if possible.

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The Anti-Nuclear, Anti-Militarist Tour de France

Anyone contemplating a European trip next (northern hemisphere) summer might care to include part or all of the French ecologistes' gentle parody of the Tour de France. The Tour occurs at roughly the same time as, and over a similar route to, the straight race which dominates the national consciousness each summer. But this one takes in most of the various nuclear sights which dot the otherwise idyllic countryside, as well as the military bases (also nuke-oriented) which are a major issue in the French ecological movement, and, recently, the cause of bitter confrontations with local farmers who object to tank battles across their fields.

Last year, the tour began and ended in Paris, and involved demonstrations, teach-ins, and general propaganda, like the uranium rides here. Foreign par-

ticipants should pick up a lot of useful experience, not least an appreciation of the density and extent of the European nuclear establishment, as well as the values and strategy of the local campaigners.

Once there, it shouldn't be expensive. Last summer, we stayed in cheap, pleasant, and unpretentious camping grounds (never more than \$1 person/night, even in Paris), which seem to be everywhere. French general stores put Australian ones to shame, and bakers don't only make White Death. Addicts should however take their own muesli and soy sauce.

Technically, conditions are usually excellent on the back roads, which go everywhere. Drivers are refreshingly courteous (most seem to be amateur cycle racers), roads are well-surfaced and sign-posted. Twenty-seven inch tyres might be hard to find. But friendly, competent bike mechanics are only 10km apart at

most, and have a soft spot for honest foreigners. All the while, the scenery — natural and social — is endlessly absorbing.

And, with a little organisation, you could buy a new bike in Paris (around \$250 for, say, the standard tourer) and reclaim the sales tax, 17 per cent of the list price, if you prove you're taking it out of France. The airlines should accept your boxed bike as part of your 20kg allowance. And lastly, bikes are still a duty-free item for returning Australian residents, which effectively subsidises your air-fare!

For more information, contact:
Tour de France Anti-Nucleaire
Les Amis de la Terre,
14(bis), Rue Arbalette
75005, Paris.

Grace Newhaven
Balgowlah 2093

Seat Warning

Our family has just joined in the great bicycle revival but unfortunately has had something of a setback. To prevent it happening to others we would like to share our experience.

I had been told that it was possible to use an old Safe'n'Sound baby seat for our 2¾ year-old and so was pleased when a friend passed on to me a photostat copy of a photo and instructions on how to attach it from *Freewheeling*.

On the way home from our first ride, after being out very happily for over an hour, she put her foot through the wheel. Luckily I had just started pedalling after walking up a steep bit so I was not going fast and was able to stop immediately. But the result was one hysterical child, with bad abrasions to the ankle and a 10cm spiral fracture between the knee and ankle. (Not to mention a very upset and guilt-ridden mother.)

I am concerned that *Freewheeling* did not mention the guard (and foot-rest) nor the possible danger of using the bike without the guard. The old bolt-in type of Safe'n'Sound car seats do make an ideal seat, with their raised sides and full belt coverage, but it would seem important to cover the subject properly by suggesting methods and materials for attaching such a guard.

Margaret O'Callaghan
Aranda 2614.

The author of the seat article, Chas Coin, replies: Please find enclosed a general reply regarding the kiddies seat and a



diagram for the construction of a wheel guard. I have sent a reply and diagram to Margaret O'Callaghan.

It is regretted that Margaret O'Callaghan's daughter should have been injured. At the time of writing and using our seat I did investigate the possibility of a foot-rest and wheel guard. However I found that with my particular construction a wheel-guard was unnecessary. The height mounted (noted in the article), and the thickness of the seat with the cushion of high density foam (50mm thick) and the forward position made it a physical impossibility for our son to bring his foot anywhere near the wheel when strapped in. However it was evident that if the seat was mounted toward the rear and a thinner cushion used, then catching the feet was a possibility.

I have subsequently seen many seats made after ours. Not all have used the Safe'n'Sound seat. Most have incorporated a wheel guard on the premise that if anything can go wrong, it will, and at the worst possible moment (Murphy's Law). On one of the best of these, however, the child did manage to put his foot into the wheel, beyond the guard and behind the seat while supposedly strapped in. His parents are still trying to figure out how he did it.

Of course it is definitely desirable that a wheel guard be used. These can be made very simply using thick plastic, vinyl, leather etc. by forming it around the seat tube and lacing either onto the front or rear set of stays of the rack (see diagram). It should also be stressed that a high quality steel rack be used (e.g. Karrimor). Some of the more common rear racks lack rigidity and strength.

And Margaret O'Callaghan replies: Many thanks for your reply to my letter about the Safe'n'Sound as a bike seat. I think that an enquiry into baby seats would be very worthwhile — perhaps it has been done in the USA? The Safe'n'Sound has a number of features, e.g. the positioning of straps and the raised sides which would probably make it rate well. The bonus about the old bolt into the car models is that they're impossible to resell as car seats because of the new models. So there must be a lot being thrown out which would make good baby bicycle seats — with a wheel guard.

Write On

Energy Deficit

I have just received *Freewheeling 8* and still find it to be impressive and informative as always. Of particular interest to me were the articles *The Man With Rubber Pedals* and *Beyond The Pub With No Beer*. However, I wish to disagree with M. Foster's article *Cycling Energetically*.

M. Foster has analysed the amount of energy utilised in producing the food required by a cyclist travelling at 25km/h. Then by way of a comparison, he has analysed the efficiency and chemical energy content of the fuel used to power a Honda 90 (hardly a representative example of the average automobile).

This all sounds quite impressive for auto addicts, and even the example of a VW Golf could bear consideration, however, he has left out one rather major factor. Motorists have to eat food. Cyclists may need to eat more, though many auto-bound travellers on long journeys would eat just as much as a cyclist on a tour and put on more weight, through sheer boredom. However, motorised travellers must eat a basic diet.

Let's assume that a motorist eats only half the amount of food that a travelling cyclist does, (certainly not excessive). Therefore, by M. Foster's calculations, 200kJ/km of primary energy is used by the motorist just to sit behind the wheel and push the accelerator. This now puts the Honda 90's primary energy consumption up to 900kJ/km, well over twice that of the cyclist at 400kJ/km. Figures for the average car with 1.2 passengers in it, not "five people crammed into a VW Golf diesel" would be considerably greater, probably six or seven times that of the Honda 90 and more than ten times that of a cyclist.

In any scientific analysis, the use of unreal basic examples (the Honda 90, non-eating motorists) leads to grossly inaccurate results, and I feel that this is the case here.

Peter Signorini
Forest Hill 3131

Veteran Cycles

If I may, through your columns, I would like to enquire whether there are any clubs or societies catering to the cycling equivalent of the motoring veteran and vintage movements, for those people who are interested in antique cycles and associated items.

I own a very old Hercules cycle which I use for exercise and would like assistance in dating it. It is old enough to sport a very attractive maker's brass plate on the frame. I would appreciate any names or addresses of people who could help. In addition, because of a special

interest in the make, I would like to acquire a Sunbeam cycle, preferably a true Marston model with the fully-enclosed chaincase from the twenties or earlier, but I would even be interested in a later post-war BSA/Sunbeam pushbike, which of course would have had to have been imported from Britain.

Two interesting areas of interest for your readers in future would be firstly the development of the pushbike over the years in respect of design and production and the Australian cycle industry which has had both ups and downs and also some moments of glory.

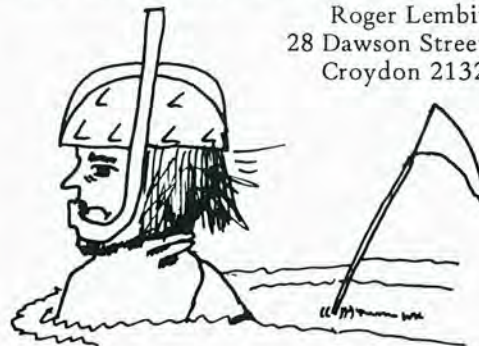
R.M. Armstrong
Nowra 2540

Departures

I am planning a bicycle trip around Australia commencing about mid-March 1981. As I am interested in bushwalking as well, my trip will include as many natural areas as possible. The route is: Sydney, Oberon, Grenfell, Hillston, Wyperfeld, Wilpena Pound, the Nullarbor, Albany, Geraldton, the Gibson Desert, Ayers Rock, Boulia, Tibooburra, the Warrumbungles, Sydney.

The pace will be fairly easy overall but with some difficult sections, e.g. Leonora to the Olgas. Plenty of time will be available for side trips and walking. I envisage the tour will take about nine months. Should anyone else be crazy enough to attempt the entire trip or sections of it, would they contact me at the address below. I would also be interested to hear from people who have covered any of the route before.

Roger Lembit
28 Dawson Street
Croydon 2132



Staying Afloat

After spending four wet weeks cycle touring Britain, I would like to convey my acquired knowledge of staying afloat

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through prolonged wet spells. You will notice that I do not say "staying dry", for I don't believe this is possible. The primary concern must be for staying as warm and as comfortable as possible.

I initially tried a cycling cape, but found this offered too much wind resistance from both front and sides, making for slow painful miles. It was also awkward to a manoeuvre while entwined in a cape. Passing traffic was a real threat, particularly trucks, which I believe, are able to suck you under their wheels as they pass thunderingly by. Also the possibility of catching a car or truck with a flapping cape is undesirable. Capes are also poor circulators of air and I found I was continually drenched with perspiration after an hour on the road, soaked from within rather than from without. So my cape became a groundsheet, a fitting end.

"Well, what's the alternative?" you may ask. I found a spray jacket and a can of Selleys Water Repellent quite adequate. The jacket has a hood which zips into the collar when not in use. The cuffs and waist are elastic. I wore a peaked cycling cap under the hood in the

rain to keep the direct force of the falling water off my face and a pair of sunglasses to protect the eyes. It gets sweaty in the jacket too, but you stay warm and manoeuvring is no problem.

The lower body and legs get wet, but the cold does not bother them since they are in motion and generate heat. The jacket is also very useful in cold weather. It keeps icy wind off the body, even in sub-zero conditions I found in Austria amid falling snow.

While in Britain on wet days I became soaked through after about four hours on the road. It was then necessary to seek shelter and a drying out to avoid colds and flu.

Pedal covers are useful in keeping cold wind off wet feet. Numb toes were a problem with feet strapped, immobile in toe straps. You can make like the racing guys do and put plastic bags inside your shoes to keep the heat in if pedal covers are beyond your budget.

If you're like me and love adverse weather, I hope these hints are useful, good cycling,

Graeme Snowdon
Newtown 2042

As A Motorist/As A Cyclist

I get great pleasure riding on long country roads and in the city streets. I also drive a car, which in years gone by, has taught me much of the dangers of being a bicycle rider.

When driving my vehicle, I keep a sharp lookout for other vehicles and objects. This policy has helped my motoring life to be much safer. I have come to the conclusion that most motorists DON'T HIT WHAT THEY CAN SEE. The usual statement after an accident is – "I just didn't see him or her".

Especially at night, drivers find it hard to see most bicycles until they are right upon them and are too close to give them their room on the road. As a cyclist this has lead to a few thoughts of "If I'm seen, I won't be hit or just missed."

The first obvious thought to mind is, does your bike include lights at night and do you use them? There are many brands on the market including some very easily seen battery sets.

Reflectors do far more than their cost would ever tell. Moving reflectors on the pedals and wheels are a super help to a car or truck coming from behind or the side. They give an outline of what is there and not just a fixed position. A white reflector certainly doesn't go astray on the front and the red rear ones go without saying. It is common sense to think of clothing colour. A white shirt or jacket for the night and orange, yellow or white for the day.

One more thing if you want to be seen and missed – a helmet. They don't only help you when you come off (I hope you never do) but it is quite obvious that a white or yellow top during the day and at night are easily seen, especially in traffic. We see heads all the time but helmets are few and far between and they attract a good look at what's below.

So the message is simple, Be Seen and Be Safer.

Peter Allen
East Brisbane 4169

Cheers

Three cheers on the excellent articles you have been putting in the *Freewheeling* magazines on the East Coast Bicycle Route guide, it has been a great help for tourists here and abroad and whether a cyclist does a section of it or the whole route it is a great help and benefit for the tourist cyclist . . . keep up the good work.

Bob Duce
New Lambton 2305

FREEWHEELING 5



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SPECIAL SECTION

THE URBAN ISSUES



In morning and evening peak-hour traffic in any large Australian city cyclists are conspicuous only by their absence. Where once (earlier this century) thousands rode into the cities, now only a tidal wave of cars threatens to engulf even life itself.

Sydney pollution levels are the world's second highest and still climbing. Melbourne and Brisbane smog levels are also on the increase. Do we need the deaths as in the great London smogs before something is done? To the modern urban cyclist, air pollution is one issue, eclipsed only by the issues directly related to the right to use the road. So far in this country, road planning has been totally dominated by car planners. Bicycle riders in Europe, Asia and other countries have always made up a large percentage of the community. In this country only children and the poor carried on a tradition of bicycling.

After the second world war, affluence in Australia increased and use of first public, then motorised private transport (the car), became widespread. And so, bicycle use in the cities became a purely recreational or part-time pursuit. The need to travel large distances and the traffic levels saw to its eventual disappearance.

In *Freewheeling*, we refer a lot to the "open road", but most of us involved in producing the magazine live in Sydney. Here the roads are not open, but closed in. Not only are there walls around them, but in an age of domination of the road space by motor vehicles, using your bicycle and sharing the road with cars is sometimes a matter of life and death. Must we have cyclists dead before the cities' water drainage grates, for example, are changed

around to stop them trapping bicycle wheels?

Cars themselves pose the most real threat to the urban bicyclist. If the car is an extension of the foot, then who could believe that the price of extending one's feet could be the road toll. Death is part of the auto age. The cost of these lives to the community can hardly be measured, yet in this country the motoring public is an accomplice to this toll. The price you pay for driving your car drunk is death or loss of licence for a period. And so mostly the drivers and passengers in the speeding machinery, the cars, are killed or severely debilitated and only a few cyclists get in the way.

The cyclists who survive are the ones who have quick reflexes or who try to avoid contact with cars and traffic wherever possible. Everyone who uses the back routes in the urban area, however, is aware that there is always the possibility of some contact with the speed and bulk of a motorised vehicle.

In a motor-based society, the controllers of the road space, the motorists, agree that it is wise and humane to segregate people in cars from people on bicycles. So a cycle path is built through a park and the pedestrians lose more territory to speeding vehicles.

The central issue concerning the urban cyclist must be the loss of our natural mobility. A transport system favouring bicycles, in which the mobility of the two-wheeled self-propelled machine is enhanced and encouraged, can and should exist side by side with the motor arterial network in all urban areas of Australia. This system would use existing road space and not consume parkland.

Motorists and motorist road space planners believe that any kind of road *improvement* necessarily involves large expensive roads such as freeways. The bicycle is a low-impact machine and what it needs most is equality on the road.

In the inner suburbs where I live, people of all ages stopped riding bicycles in large numbers many years ago. In an age in which access to a car became a possibility for everyone above seventeen, only children and a very few adults continued to make up the regular cycling population.

Nowadays there is more interest in bicycles. In the inner urban areas of this country where large concentrations of people live, a return to large numbers of cyclists is now prevented by a Catch 22 situation which goes as follows: Q. Why don't you ride your bike around the city more often?

A. Oh, it's dangerous. I almost got killed last time I rode. I'd bike it if it were safe, if there were no traffic.

Q. Would there be less traffic if we rode bicycles?

A. Perhaps, but I won't ride because of the traffic.

In this issue of *Freewheeling*, we examine some of the issues which are the daily reality of the urban cyclist. Not all of them are covered in this magazine, others will follow in time.

With our urban experience, we feel it's important for bicycle users to spell out their needs and become involved in the planning process. The publishers of this magazine believe that the time to act is now, before we all end up dead in the gutters.

Warren Salomon

SPECIAL SECTION

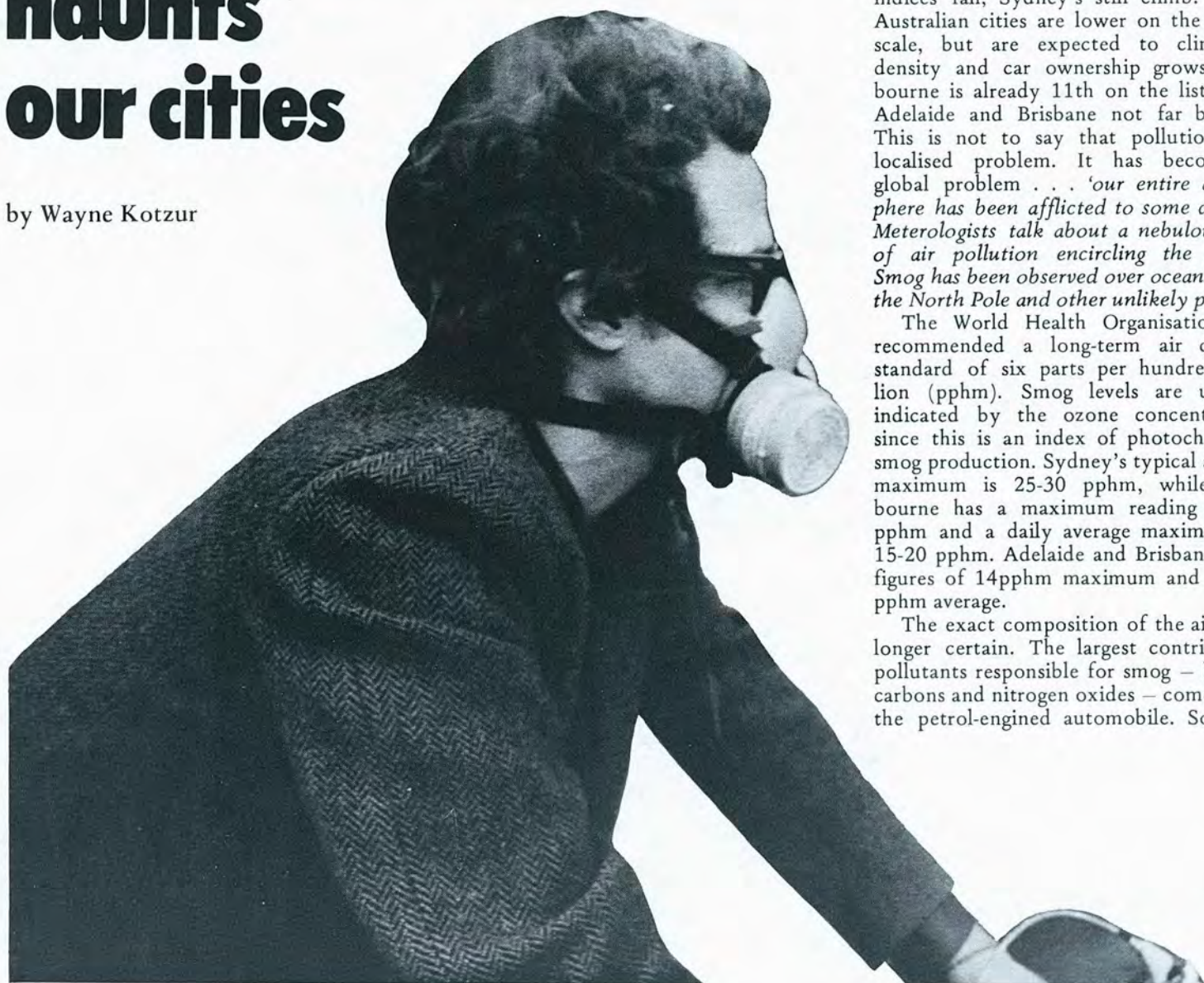
THE URBAN ISSUES



POLLUTION

The slow death which haunts our cities

by Wayne Kotzur



Over four years ago, 13 students from a south Sydney high school had to be hospitalised and treated for acute chest and lung pain. This was the first recognised attack of smog pollution in Australia.

We have come a long way since those sunny March days of 1976. Air pollution has grown to be an alarming problem. Almost one tenth of a tonne of pollutants is added annually to the atmosphere for every person in Australia. Sydney is on the way to challenging both Los Angeles and Tokyo as smog capital of the world. As their reported pollution indices fall, Sydney's still climb. Other Australian cities are lower on the world scale, but are expected to climb as density and car ownership grows. Melbourne is already 11th on the list, with Adelaide and Brisbane not far behind. This is not to say that pollution is a localised problem. It has become a global problem . . . *'our entire atmosphere has been afflicted to some degree. Meteorologists talk about a nebulous veil of air pollution encircling the globe. Smog has been observed over oceans, over the North Pole and other unlikely places'*¹

The World Health Organisation has recommended a long-term air quality standard of six parts per hundred million (pphm). Smog levels are usually indicated by the ozone concentration since this is an index of photochemical smog production. Sydney's typical annual maximum is 25-30 pphm, while Melbourne has a maximum reading of 25 pphm and a daily average maximum of 15-20 pphm. Adelaide and Brisbane have figures of 14pphm maximum and 10-12 pphm average.

The exact composition of the air is no longer certain. The largest contributing pollutants responsible for smog — hydrocarbons and nitrogen oxides — come from the petrol-engined automobile. Someth-

ing like 660 tonnes of hydrocarbons are emitted into Sydney's air every high-smog day. This is more than three times the amount emitted from industrial processes such as refining.

The pollutants of principal concern in the atmosphere are: particulates (smoke, grit, dust, asbestos, etc), acid gases (sulphur dioxide, hydrogen sulphide etc), carbon monoxide, oxides of nitrogen, hydrocarbons, metal fumes and metallic oxides, other internal combustion products (lead, aldehydes, aromatics, ammonia, smoke) and photochemical smog.

The Human Experiment

I have frequent contact with commuting cyclists who spend an hour to an hour and a half a day cycling in some of the world's worst pollution. I do the same. They seem healthy and fit. So do I. The point is that no research has been conducted to determine the effects on a cyclist. Science and industry are not interested in showing they may be harming the general population because of their own vested interests.

The World Health Organisation Expert Committee on Air Quality criteria concluded that *'increased emissions have already, on several occasions, and in several places, lead to ground-level concentrations that were associated with dramatic rises in disease and death. There is abundant evidence that high levels of air pollutants may generally be harmful to human beings, and there is no evidence that pollutants at any level are beneficial.'*

What *Freewheeling* is more interested in is the specific risks involved in cycling, as compared to the risks facing the general population. In that context I must say that no definite answer is possible. Logically, cycling promotes cardiovascular fitness and general body health. It also makes people better able to cope from day to day. It would, tentatively, follow that this fitness raises the level of defence against disease. How much of this extra defence air pollution erodes is unknown.

Dr Paul Ehrlich lists four points which make it very difficult to give more definitive statements about the precise effects of air pollution:

POLLUTANTS are numerous and varied, and many are difficult to detect. Long study is necessary to reveal delayed effects (10-30 years).

IT IS usually impossible to determine accurately the exposure of an individual to pollutants.

AIR pollution risks correlate with other factors, such as stress, other pollutants and food additives, which must also be considered.

POLLUTANTS that do not cause problems when tested alone may be dangerous when in combination with other environmental pollutants. Such actions are called synergistic; the danger from the

two combined can be greater than the sum of the individual dangers.

We are all living in a dangerous experiment.

What We Do Know

Someone once wrote that if you ride behind a diesel truck, you will know all you need to know about air pollution. Unfortunately, this is largely a misconception. Research indicates that the more visible or smelly particles are not necessarily the most irritating. Also the most irritating pollutants are not always the most dangerous.²

However, several "rules" of toxicology have come to gain validity in the eyes of health and pollution experts.³

AIR pollution health problems do not occur in isolation. Cyclists are exposed to other chemical agents at work and home. This is especially true of people who live or work with cigarette smokers. Most of the realistic effects of pollution occur in combination.

CANCER is caused mainly by exposure to chemical or physical agents in the environment. While some carcinogens occur naturally, an exponential rise in synthetically-produced petrochemical carcinogens has been occurring in the air we breathe. There is no safe level of exposure to any carcinogen. There is no basis for industry claims that exposure to low levels of cancerous agents is safe and therefore justifiable.

SUSCEPTIBILITY to disease is unpredictable. Some may never be affected seriously by high levels of pollution. Others may suffer severely from a single exposure.

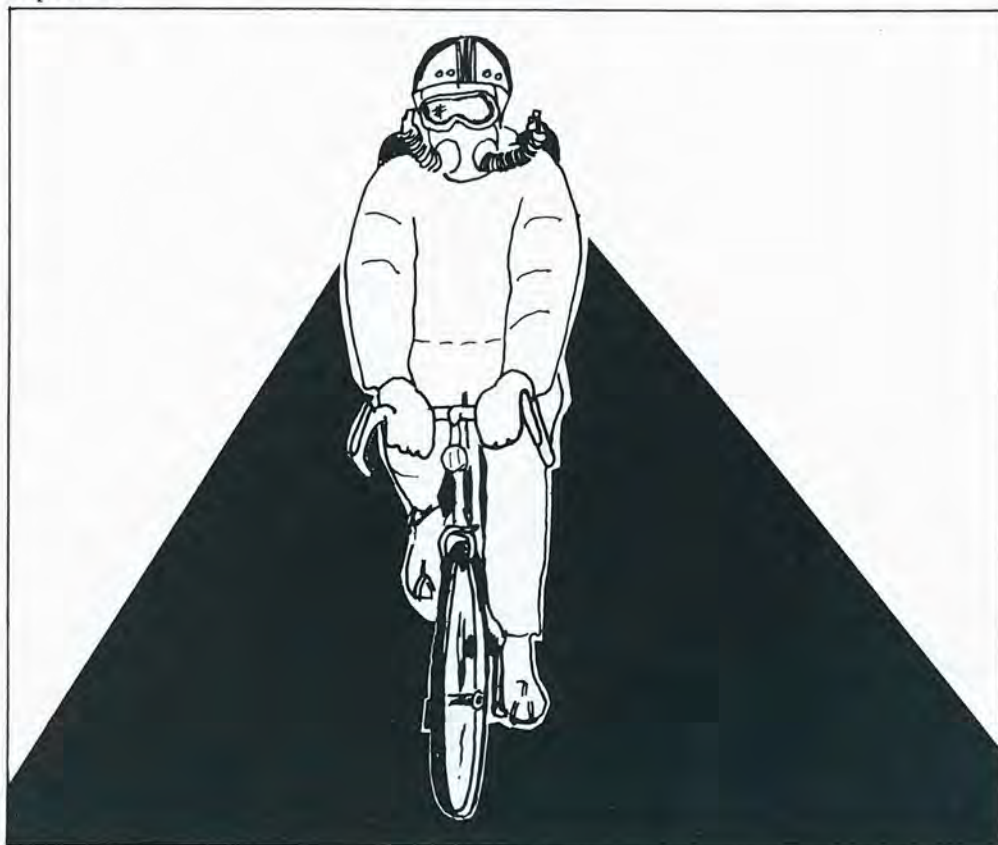
Let us examine in more detail some known effects of the various pollutants.

Carbon monoxide presents no real danger to cyclists. Its effects are not permanent. Its effects on the car drivers – since it causes lowered vigilance – should be more worrying to the cyclist. Because of poor ventilation and leakages the passenger space is usually more polluted than the outside air.

Lead. What worries cyclists more than any other compound is lead. This is probably because it is known as a cumulative toxin, capable of being absorbed through the lungs, or in the diet, and that it can cross the placenta. Of the atmospheric lead, 88 percent comes from cars. Lead circulates through the bloodstream, with about 50 percent being excreted. The rest is stored in bones and soft tissues, especially the liver and kidney. It is also present in hair, teeth and nails.

It presents a two-fold problem. In developing children and foetuses it can have disastrous results. Large studies^{5,6} (not by the oil companies) have consistently shown that very early lead exposure makes children less competent in speech, auditory processing, concentration, persistence and self-organisation. In short, it can affect the subtle development of the brain.

In adults the story is different. Nervous development has ceased. There is a continuous turnover of lead in the body, so that current levels tend to reflect the current degree of exposure. In one sense it is an equilibrium reaction, the storage level decreasing with lower air levels of lead.



Particulates. Particulate passage into the lungs is fairly dependent upon size. The human lung can screen most dusts (10-100 microns) and grits (larger than 100 microns). Smoke consists of very fine particles or liquids typically one micron or less. Those smaller than 0.1 micron are usually exhaled again. Particulates may have other pollutants attached to their surfaces, carrying them further into the lung than normally. Some particulates, such as asbestos from brake linings and some metals are carcinogenic. Others act as irritants which coalesce the smallest balloons of the lung or constrict the fine passageways. These reduce the capacity of the lungs to provide oxygen to the blood.

Sulphur dioxide is a known irritant to respiratory passages, causing coughing and choking. It is thought to be the agent that causes severe respiratory attacks to lung disease sufferers. In very bad pollution, sulphur dioxide has been implicated in increased rates of asthma, bronchitis and emphysema. It is carried into the lungs on small engine combustion particulates or as mist.

Oxides of Nitrogen are predominantly products of internal combustion engines, where atmospheric oxygen and nitrogen combine under the high pressure and temperature present. They play an important role in the formation of smog. Nitrogen oxides are absorbed by the blood in a similar way to carbon monoxide, reducing the oxygen-carrying capacity of the blood.

Photochemical Smog. The products of engine combustion, plus incompletely burnt fuel, interact with each other, and with secondary pollutants in the presence of sunlight to produce the characteristic pollution found over most developed congested areas. Generally the primary pollutants are less offensive to the senses and to life than the secondary pollutants. Ozone is the best known component of smog. Ozone produces eye and throat irritation, and can produce temporary exhilaration followed by depression. Headaches and drowsiness are its more familiar effects (5-10 ppm). On 260 days in 1974 in Sydney, its concentration exceeded the eight-hour goal set by the WHO. It does major damage to vegetation, rubber and synthetic materials.

What You Can Do

All this sounds a little disconcerting. However the serious cyclist can adopt many practices to reduce the risks of serious illness significantly. Indeed the risk can probably be reduced to that of the general population. A short-term study⁷ conducted by the US Department of Transportation suggests that cyclists were less affected by traffic fumes than the motorist on the same route. Irritation of the skin and eyes, understandably, was higher, but no



long-term effects were found. Additionally, cyclists had lower carbon monoxide levels than motorists or pedestrians. Rapid deep breathing increases carbon monoxide's removal almost as fast as its absorption.⁸

Most air pollution in urban areas derives from automobiles. The exhaust emissions are in a highly activated state, and as such constitute the greatest risk. There is rapid settling of most particulates, so that at, say 40 metres from a major highway the level is similar to the level of the general area. This means that most particulates — lead, soots, dusts, asbestos, metal flakes — are confined to a narrow zone within 40m on the lee of the highway. For particulates then, the concentration roughly depends upon the volume of traffic, the local meteorology and traffic patterns.

As for gaseous materials, the removal mechanisms for cleaning the air are different. Many vapours are in a radical or unbalanced, highly-reactive state when emitted, and rapidly coalesce. The less reactive agents consequently formed are probably less dangerous. The more stable gases, nitrogen oxides and sulphur dioxide, rely on rainfall to clear the sky, or on non-biological reaction⁹ with the soil to remove them. These, together with stable gases such as carbon monoxide (which is removed eventually by soil fungi¹⁰) and carbon dioxide (utilised by vegetation) rely on short-term dilution to diminish the dangers. This is proportional, roughly, to distance from the pollution source.

It seems there is a strong correlation between cancer incidence and proximity to heavily travelled highways.¹¹

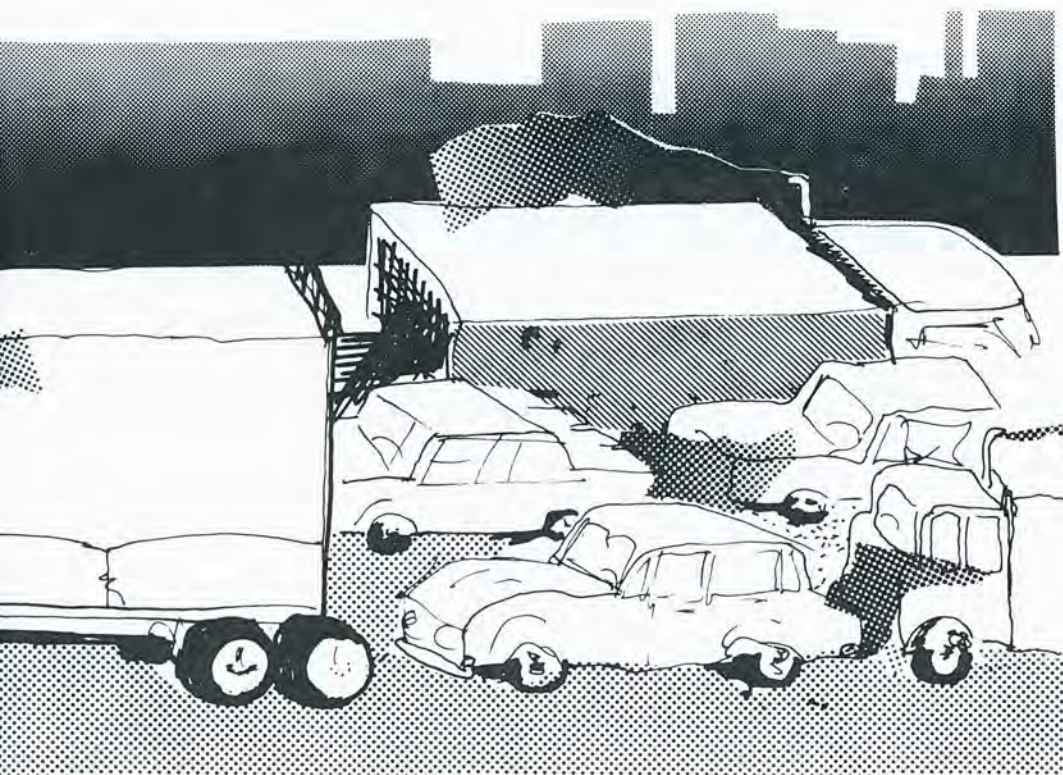
For cyclists, the most logical course is

to choose routes which avoid main roads and congested intersections. This is the easiest way to reduce the inhalation of car-generated carcinogens, particulates and reactive gases. It is best to avoid all unnecessary exposures now, rather than find out the results of exposure later in life.

A second course for those especially concerned at the risk, say with an impossibly polluted route, is the use of a respirator. These devices restrict breathing, and can affect side and rearward vision. The only respirator that would seem to be adequate is the CIG twin yellow cartridge, which claims to protect against acid gases and organic vapours. (It is believed to filter particulates but this is not specified.) All masks have the disadvantage of poor ventilation — lack of cooling and sweatiness. They can be comfortable, and make good street theatre; emphasising what onlookers are breathing.

The single most effective action you can take is to never start smoking, or if this advice comes too late, to stop smoking immediately. Smoking destroys the ability of the lungs to remove inhaled foreign bodies, as the upward cleaning mucus flow is stopped by the destruction of the propelling cell hairs. Smoking seriously increases the cancer risk about 30 times,³ as well as raising susceptibility to chronic lung and heart disease. Your lungs are the most delicate and vital organ between you and the air — protect them for your own sake.

Alcohol too has a synergistic effect with pollutants³, so that all types of cancers are exacerbated with its use. It is not as significant as smoking. The exact mechanism is not understood, but it is



thought that it may act as a solvent, enabling normally insoluble pollutants to pass through the stomach lining into the blood system. Don't drink alcohol.

On the basis of indirect evidence, a low-fibre, high-fat diet increases the risk of cancer of the colon and possibly other cancers, including breast, while a high-fibre low-fat diet reduces the risk of these. There is debate over these diets — the risk reduction may merely reflect a reduced intake of carcinogenic contaminants found in animal fats. However an emphasis on unprocessed vegetables, beans, grains and fruit will prevent nutritional deficiencies which lower the body's resistance to disease.

There are some special risks for cyclists which are not often appreciated. I thought mention of these would round out the cyclist's personal response to pollution. Air pollution doesn't occur just on the street. When cleaning our bikes or repairing a tyre we release fumes dangerous to health. Tube repair cement contains benzene — a very potent carcinogen. Use it only in well ventilated areas. Relatively harmless toluene-based glues have been developed, but no-one cares enough about cyclists, yet, to put these glues in puncture repair kits. Cleaning and lubricating fluids, being petroleum-based, are likely to damage the skin and lungs. Use sparingly, use soap wherever possible.

What We Can Do

On the political side, I think a cyclist's best first response is anger, and a determination to keep cycling. You are using what is one of the least violent, most environmentally-enhancing and socially-productive tools ever invented.

Your cycling harms no-one; indeed it promotes a healthy alternative to the cars that belch pollution, even when idling, and force us gasping into the gutter. The bicycle is an emission control device whose time has come.

A second step is group action. Car quality is declining. It will continue to deteriorate if car sales and use continue as they have, and advanced pollution control legislation are not bought into law. In the United States the Clean Air Act emission standards are much tougher than here. Yet air quality projections for the Los Angeles air basin show that, even if all automobiles met the original standards, air quality would begin to deteriorate in the early 1980s simply because of the continued growth of automobile use.¹² A two-pronged attack is necessary...

Cyclists should support all moves to increase the stringency of car emission control equipment and to discourage the dominance of the car.

Emission Control

Australian Design Rule 27A, which deals with exhaust emission controls, has been quietly ignored in most states. Only NSW (Labor) is implementing the third stage. Car lobbyists claim that the costs (to them), are too great, and that emission control usually means reduced fuel economy. It is rather ironic that overseas standards which are seven times as restrictive are met by the same multinational manufacturers who claim it is not possible in Australia. Something in the air? More strict controls can be installed in a car which can deliver a greater fuel economy.

The most hopeful air pollution pro-

gram in Australia is NSW's decision to remove lead from petrol. (*Freewheeling* commends Paul Landa, previous Minister of the Environment, for his determination to place people before money.) Lead is added to petrol as an alternative to further refining. It is a cheap way oil companies can boost the octane rating. High octane fuels are needed only in high performance, high compression engines; and there are plenty of engines around which do not need it. Additional polluting compounds (scavenging agents) are also added to prevent lead deposits forming in the engine. Lead also interferes with catalytic converters which could be the next step in exhaust controls. It poisons the converter, which promises to reduce some emissions by up to 80 per cent.¹³ Protest, involve your MP etc. It is essential to everyone's health that lead be removed from petrol all over Australia.

While we may hope for breakthroughs in new, effective, inexpensive pollution-control technology, I do not believe it is wise to count on such technological fixes (consider nuclear power). Another author described it thus: *the inherent danger of technological solutions to environmental problems is that they give the impression that the problem is being tackled, and, in a society geared to growth, this allows the system to continue its headlong rush.*

For cyclists, air pollution will always mean cars... the excessive use of high-powered, highly-polluting automobiles. Cyclists must foster the growth of bicycle use and the alternative of public transport. We cannot stand on the footpaths of life — social values need changing. Let's get on the road to the future.

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SPECIAL SECTION

THE URBAN ISSUES



ON THE ROAD AND STAYING THERE

by Neil Jones

There's been a big question haunting me for years. How many cyclists experience serious intimidation by car drivers. We all know intimidation by the average inconsiderate motorists but what of overt aggression? It's been my own unhappy experience that many times over the last five years, drivers and their passengers have gone out of their way to risk my safety.

Aggressive acts have taken many different forms. Throwing cans, eggs, fruit, etc., have been common. Even plastic teacups. But it's never been as permanently imprinted on my memory as one instance of actual physical assault.

Take the latter as an extreme example. After already riding some fifteen kilometres from Bankstown to Annandale en route to Glebe in the inner city of Sydney a rather dramatic event occurred: A *Gung-ho* Torana driver insisted on overtaking in a way that clearly risked my safety. Astride the lane markers and within a few centimetres of me and my bike he planted the accelerator and barged through. It's nothing less than frightening when I was already moving at forty or more kilometres per hour.

In this situation the most effective signal of danger is a good thump on the car's roof. That done, the Torana screeched to a swerving halt forcing me into the gutter. Out of the car stormed a two-metre-plus karate killer with the meanest expression behind a John Newcombe moustache I have ever seen. I made a vain attempt to convince him that god/car was not damaged. This had little effect as bike and I were both lifted from roadway to footpath.

From the cold and icy height of this macho-man came the question whether I would like the bike broken, presumably over me. He obligingly repeated the question as I continued to point out his previous bad behaviour. On the second asking of the question I had to say no. Blind fear along with a commitment to defend cyclist's rights can tap some amazing responses. A greengrocer jumped between us, obviously convinced, as I

was, that this bicycle molester meant business. Fear and loathing are strong emotions and act together to trigger explosive acts. It wasn't until the aggressor began to leave that the real potential of his actions began to sink in. I had never felt appreciative of greengrocers before. He hadn't even said anything and just smiled when I said thanks and got back on the bike, still enraged and equally intimidated by such ferocious aggression.

Some people might claim that punching a car is sufficient provocation. What sort of irrational significance do car owners have for such mild actions against their cars? This sort of action is un-

necessary in any case. Enough blatant acts have occurred before and since to confirm the lack of provocation. Unless of course the lawful act of cycling on a roadway is sufficient provocation.

Cyclists need not be frightened by such stories, however. This is not an attempt to turn people against cycling, and certainly not to stop people taking action to defend themselves. Rather, resistance to such possibilities of attack should be taken. Largely, it must be an attempt to educate motorists that firstly their aggression is misdirected if it's applied to cyclists. Secondly, the actual danger they are putting you in has to be made clear to them.

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To make aggression useless in itself, the cyclist has to show that it is ineffective in deterring the cyclist. Make up your own mind how to do that. If you're a pacifist it might be to talk your way through the situation, even a mindless jabbering may distract the driver from his original intent. It's worked for me, gradually whatever you say makes sense. Some prepared slogans and dogma are effective. If you're not a pacifist, take care how you react to aggression. A handy route of escape may be necessary. Being alone on the road is the most risky. Car drivers are strangers and have their own means of quick escape.

Just as provocation is not a necessary precondition of attacker intimidation, nor is being alone on the road. My wife, Janette, and I were cut off and stopped by an irate motorist thirteen kilometres west of Sydney city. A worker returning home from work on a Saturday afternoon, he was upset that we were riding two-abreast in the kerbside lane. Janette was busy explaining the legalities to him while I was stopped a couple of metres in front. As Janette made his mistaken view of our rights clear to him he attempted that usual escape technique of dropping the clutch only to find that I was blocking the way. This was a fortunate coincidence as Janette then had a longer opportunity to defend cyclists' rights in general and he seemed to calm down. Whether he was convinced we don't know but despite the upsetting aspects of these confrontations, this one allowed us to achieve greater comeback at the aggressive motorist on the spot.

Cyclists do have a fundamental head start over drivers in any argument. All regular riders and beginners should gain confidence from their basic advantage. Cycling is economically, physiologically, environmentally as well as emotionally a more practical method of commuting than driving. Perception of the road space when riding is clearer in the context of personal safety due to the cyclist's needs and physical exertion. If in a pair or group, the possibility of united action to defend your rights and fight back, at least verbally, can be taken.

You know why you're there. Get fully aware of your legal rights and confront offending motorists with some heavy verbiage. Defiance of the present auto-cracy over transport is necessary for cyclists' continued survival and future growth in numbers. Our lungs are the filters for those lead-spewing cars and we've got to achieve consciousness-raising amongst motorists before significant change occurs. Misconceptions about our place on the roads are our biggest disadvantage. Let's take more control and build our collective confidence as a group and as individuals on the road.

SURVIVAL GEAR

Listed below are items of survival gear for the modern urban cyclist. Many are considered an absolute necessity (reflectors, lights) whereas others are considered by some to be advisable but optional. Prices given will vary with the shop and the state of purchase.

Helmet: A bicycle helmet should be light and well ventilated. Buy the best, your head deserves it. Prices \$25 to \$60.

Safety Vest: Fluorescent with reflective strips are best. The X type has better ventilation. \$7 to \$30.

Lighting System: Battery or generator, the more lights front and rear the better. Battery sets \$12 to \$17. Generator sets \$12 to \$25.

Reflectors: Jumbo rear reflectors (15cm) are most visible. White is for front, red for rear and amber for pedal and spoke reflectors. Kits cost about \$5-\$6. Single reflectors and bracket \$1-\$5.50.

Leg/Arm Light: A light weight

portable light which shows red to rear and white to the front. When strapped to the leg is a very distinctive type of light. Flashing type is best but hard to get. \$2-8.

Safety Flag: Good for letting impatient overtaking motorists know that there is a bicycle ahead. \$3-\$6.

Distancing Reflector: A reflector on a swing arm mounted on the right hand side of the bike. Great for keeping motorists at bay. \$4-\$6.

Reflective Anklets: Work well in place of trouser clips. Velcro fastening reflective material. \$5-\$15.

Respirator: More for effect than actual performance. A lot of airborne pollutants can't be filtered, though the yellow acid gases/organic vapour cartridges do filter some of the muck. The next best thing to a scuba tank. Sydney cyclists wear them and they might just get some action on the horrible air pollution problem as a result.



SPECIAL SECTION

THE URBAN ISSUES



SYDNEY CYCLISTS RIDE TO RECLAIM THE ROAD

by Warren Salomon.

Out of a winter of discontent, Sydney cyclists began their campaign to Reclaim the Road. The appearance on the Sydney streets of the *Cycle Squad* was followed by the launching of the campaign in a large and purposeful group ride on Sydney Town Hall. The campaign became visible in early August when the cycle squad, six riders drawn from a larger group, took to the streets to remind Sydney's population that cyclists were being affected by the traffic. Concern over pollution is becoming a major issue in the central city area and the appearance of cyclists in gas masks on the streets individually or in groups has attracted even mass media interest.

On a dull Saturday morning, about 300 cyclists rode en masse to a rally outside Town Hall. The ride began at the Moore Park cycleway and symbolically took to the main road and on into town. Some may have wondered of things to come as the large groups of gas mask-wearing riders (paper masks were distributed free) swept into Sydney with their unwilling police escort. The police were not needed as the motorists on the whole were orderly. Large rides are a chance for even the occasional rider to become visible and experience the humanity of bicycle traffic. It has been said that demos are great big social events for a common *cause* or purpose. Ours was to give notice that cyclists intend to reclaim our road space and natural mobility.

On the steps of the Town Hall, riders were urged by cyclist speakers to participate in the planning process and get things going in their own localities. Alan Parker, research officer of the Bicycle

Institute of Victoria, harangued the crowd and the passing motorists but hearing him was difficult because of the traffic noise. Alan voiced one of the group's main proposals, that an urban cyclist-preferred road network should be created in Sydney. He said for the cost of constructing a few kilometres of freeways a *complete* cycle network for Sydney could be built. Most motorists experiencing the ride via the media were puzzled. One driver wrote to the Sydney Morning Herald after the ride that he thought that providing for cyclists was an expensive business and that anyway bicycle users paid no road tax and they had no right to the use of the road or the roadworks dollars.

The bicycle is a low-impact machine, that is, it does not require heavy technology to create a usable road space. To *construct* a cycle network for the city of Sydney would need only a fraction of the money spent on *maintaining* Sydney's present motor arterial network. Everyone even a bicyclist, contributes in some way to the cost of maintaining this road system. Cyclists have such little impact on it, yet they are forced off it by speeding machinery.

The next move in the campaign is to see that the views of the bicycle user are heard where it counts. This involves participation in the public planning process. Reclaim the Road is urging cyclists to establish contact with their local council and ensure that cyclists take part in the provision of facilities for local bike riders. The state government will be approached by the group's supporters to back up local government's efforts and initiate a Sydney bicycle plan.

Such a network is already possible at very little cost to the taxpayer. Cyclists have discovered and have been using back roads for years. What is needed first in Sydney is the publication of a route map to familiarise regular cyclists with these routes. This should be accompanied by improvements to problem points (difficult intersections, squeeze points, lack of alternative routes) by local councils aided by the state government. Every attempt must be made to return the natural mobility which is suppressed by contact with motor traffic.

A cycle network should include limited closure of streets to motor traffic, and existing limited pedestrian space must not be taken over by cyclists.

In other countries where the bicycle is part of a cultural tradition, there are cycle path networks which work for bicyclists and include many design solutions which could be applicable to the Sydney environment. Sydney grew rapidly from a walking-distance city to a public transport city and even more rapidly to a car city. If the bicycle is to achieve its promise, then a bicycling-distance city must be the goal.

What makes the Reclaim the Road campaign inevitable and not just possible is that it is in harmony with the times. The car is rapidly becoming an expensive means of personal mobility. And surely we as a country could burn up our dwindling resources more usefully than as fuel for our increasingly obese, petrol-driven lifestyles.

In most large cities there is a move back to the original suburbs, which because of urban spread are now the inner city, and to energy efficient public transport instead of the car. The present system can only cope with a certain increase in usage before problems arise. In a more localised society, where distances travelled are not as great, the bicycle comes into its own. If riding to one's work place becomes a reality instead of a tedious public transport journey, then and only then will large numbers of people turn to the bicycle on a daily basis.

The Reclaim the Road campaign is devoted to making sure that today's cyclists are given proper facilities and access to the road space today and that they don't have to wait until next decade. That is, to reclaim the road for the cyclist today so that cycling can survive in an energy-starved tomorrow.



Cycle Squad makes its point

The Cycle Squad, a group of cyclists drawn from a larger group, ride in formation through Sydney's lunch-hour traffic once a week. Six to eight cyclists dressed in black shirts, orange reflective vests, helmets and gas masks create a strong impact even in the busy city streets.

Why are they doing this? Pedestrians ask this question and some give the answer. After all, they have to breathe the same foul air. But pollution is only a part of it. Many more people watch the cycle squad's progress with curiosity and interest. Motorists accept the presence of these cyclists (if somewhat reluctantly) and recognise their rights on the road. This is a rare experience for the urban cyclist.

These weekly performances began in mid-August and each lasts about 45 minutes. The Cycle Squad is surrounded by its constantly-changing audience, whose facial and often vocal expressions give direct feedback. This is the beginning of some

cyclists' reactions to Reclaim the Road.

By indicating the cyclist's potential role in greatly reducing the city's pollution, the Cycle Squad hopes to get the exposure it needs to publicise all problems faced by cyclists in the city and how accessible and inexpensive the solutions are. When effective, these solutions will open the road to those people who enjoy cycling but prefer not to risk their lives in daily travel. Motorists must be made aware that the bicycle is a vehicle, and that road rights exist for all vehicles. Mobility is the right of all people, not a privilege for those with the greatest bulk on wheels.

It seems the Cycle Squad is getting the attention it seeks. It has already had front-page photos with relevant information on two of Sydney's morning papers and news coverage on two TV stations with more planned. The news is spreading quickly

and the Cycle Squad has already received a clipping from a New Zealand daily paper with a photo and description of their actions. Some of the squad's aims are fulfilled already.

Even in full Cycle Squad gear, the group is not too formidable. Often cyclists who happen to be passing will join the squad for part of its journey and though gas masks muffle conversation, a chat at the traffic lights is not uncommon. The group is far from rigid. Though a few riders tend to be regulars, there are new and different squad members each week. There are workers of varying occupations and a range of students who take a break in their day's activities to enjoy the solidarity of this city ride when they can. To enjoy it is enough, but the achievement is much more.

New members are always welcome, for more information, contact Coco on (02) 660 6605 or Amanda on 660 8273 or at 4/14 Arundel Street, Glebe 2037.

SPECIAL SECTION

THE URBAN ISSUES



Wilf checks over a section of his cycle route map. He hopes that smaller size maps clearly showing cyclist-preferred routes in an area will be available in the near future for Sydney bicycle riders to use.

Wilf maps the way ahead

Bicyclist-preferred arterials – are they just a cyclist's dream? A network of roads running through a city to its outer edges, even linking it with other towns, on which the cyclists can have the safest, most convenient and comfortable ride available. If this is a dream, Wilf Hilder is one person working toward making it a reality.

Wilf, a public servant and committee member of the Bicycle Institute of NSW has been cycling in Sydney for three years.

As a commuting cyclist, Wilf had tested the various routes to work and found the most suitable in terms of traffic, gradient, road surface and distance. Yet when he asked other cyclists why they left their bikes at home when going to work, uni or wherever "I'm in a hurry when I go to work and the highway is just too dangerous" and "I tried it once, but all that traffic! It just wasn't worth the hassle" were typical replies.

Obviously most regular commuter cyclists had done the groundwork to make their own travel a more pleasant and safe occupation, but the information wasn't spreading. When riding in new

territory, it is impossible to find the most viable route by using just a standard street directory. Wilf recalls his route devised by this method from Arncliffe to Mortlake, two Sydney suburbs. Although a relatively short distance, it included seven hills! This wasn't obvious from the street directory, so Wilf concluded, "This drawing of straight lines from maps is for the birds".

What about cyclists? Imagine a cyclist's road map, more compact and much less bulky than the standard car-oriented type, which clearly marks a cyclist-preferred road system from the outer edges to the centre of the city. You could visit friends on the other side of the city without discovering all the traffic hazards, steep climbs and pot-holes in between. You could arrive from

another town and find your way around with relative ease. This is what Wilf is working towards. Although his efforts are Sydney-based, he hopes his work will stimulate a similar program in towns and cities throughout Australia.

In May this year, by word of mouth and through the BINSW, Wilf called for Sydney bike route contributions. Routes submitted were marked on his maps and tested when possible. The maps Wilf uses are the UBD Sydney Region in two double-sided sheets (east and west). These fold to 13 x 23cm, are three-colour printed and sell for \$3 each. Early in 1981 some single-sheet maps will be printed by BINSW of parts of the inner-city bicycle routes.

Wilf and BINSW would also like feedback in the form of criticism and alternative suggestions, but he stresses that health, safety and peace of mind have much higher priority ratings than speed. That is, highways are to be avoided wherever possible.

In answer to many requests, Wilf hopes to complete his bike route book by the end of 1981 and have it published for the use of all cyclists. Before this, there are many gaps to be filled. Although the routes extend from Richmond to Cronulla, Wallacia to Newport and Turramurra to Waterfall, many places are as yet uncharted. Suburbs within eight kilometres of the Harbour Bridge are pretty well covered but the trails thin out from there. If you have your own well-worn track through Sydney, Wilf would be only too glad to hear of it. He also welcomes any enquiries.

As these routes become consistently used by cyclists, more people will be encouraged to ride in this safe convenient system. This is an obvious lead-up to recognition of cyclist-preferred arterials and subsequent council approval of closure of some streets to motor traffic. With this, not only could we all bike for a better city, but with the co-operation of other towns and cities a complete cycle network for Australia is a possibility. This could be used by overseas tourists as well as opening up our own country for our own exploration.

With the work and conviction of Wilf Hilder and the contributions of many others, this dream is looking surprisingly real. If you wish to help Wilf in his efforts, write to: Wilf Hilder, 42A Rickard Street, Turrella 2205.

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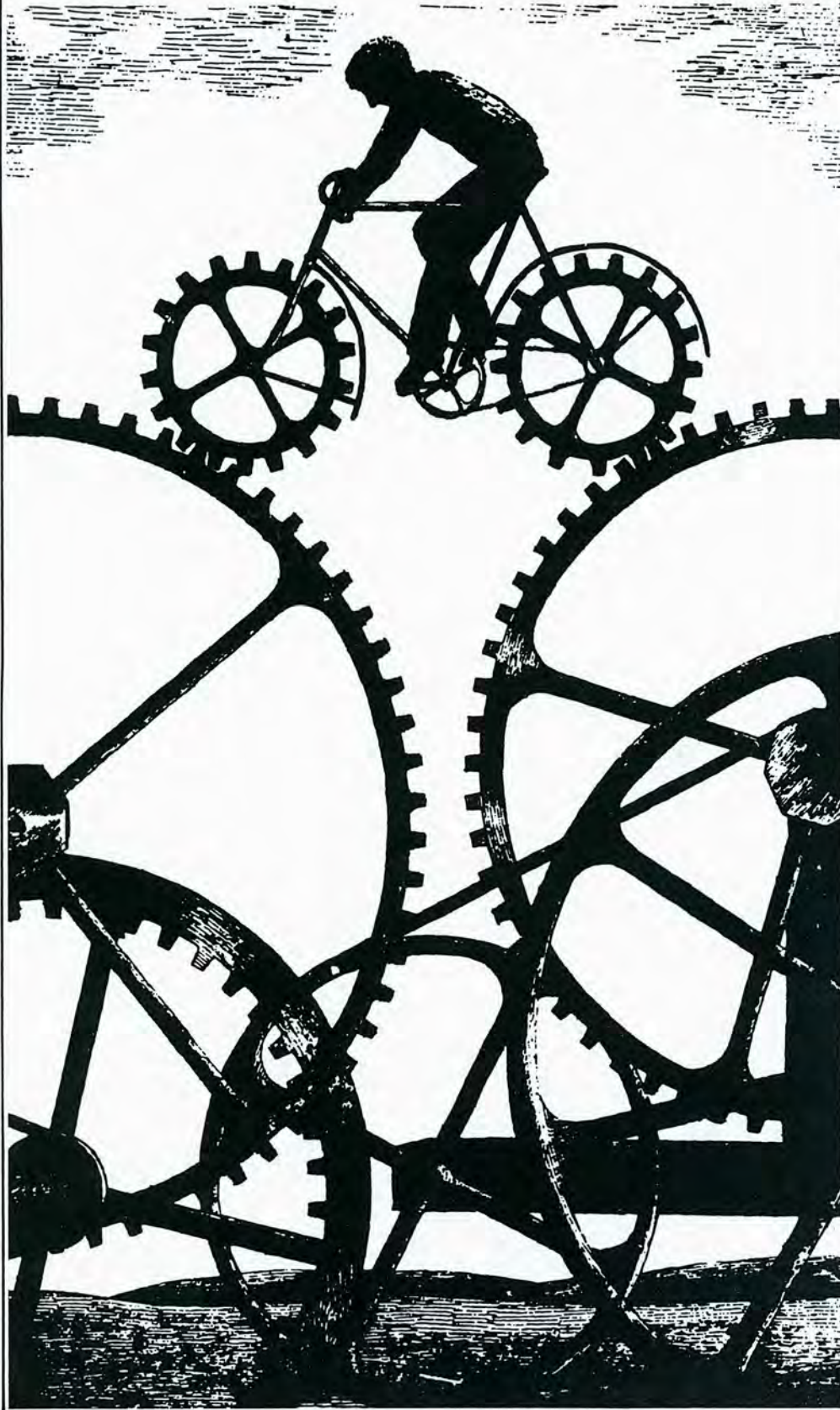
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Sifting through the Standards

On October 31, AS1927 (1978) and AS2142 (1978), the manufacturing standards relating to bicycles and bicycle reflectors became law. How the standards will affect the trade in future remains to be seen. How the standard has come about and how it has already affected the industry and the market place reveals an amount of muddleheadedness which has characterised industry's and government's responses to a whole range of consumer protection and safety issues.

The legislation embodying the new standards originated as a result of recommendations of a parliamentary report on bicycle safety. The standards were formed by a committee consisting of government Standards Association of Australia and industry representatives. It has often been suggested that the original idea behind having a standard at all was to stop the flood of cheap and shoddy imported machines (selling mainly through outlets other than bicycle shops) which were outselling the local product at an alarming rate. What makes this suggestion look a bit ridiculous is that there is next to no local product at all.

Though there are locally-based companies which assemble bicycles in Australia, only a few of these still manufacture their bicycle frames and only one uses locally-produced frame tubing. Virtually all the rest of the components are imported. In the setting of the standards, the industry representatives were from the larger companies, and the result is a ruling which naturally favours their method of operation. Each model of bicycle has to be subjected to a series of tests to be carried out by an SAA-approved testing agency. The full cost of the tests (around \$600 per model) were to be borne by the manufacturer. This has added to industry overheads and thus to the final cost to the bicyclist.

The major companies duly submitted their current model for test. So did the discount stores. With their Taiwanese factories licensed as a result, they have preserved their market share and perhaps even increased it as a result.

The cost of the testing is miniscule in relation to the turnover of the larger manufacturer, but to the smaller manufacturer it is a big burden. With all the wind in Canberra these days about the plight of small business, it is amazing that parliament should allow something to become law when it is contrary to the policy of the governing party.

The law discriminates against the smaller manufacturer/assembler who is often a retail dealer who builds bicycles up from a kit or from components and who usually puts the shop sticker on it. The cost of testing to these companies and individuals is high by comparison with turnover. The net effect is to make the dealer more a salesperson for the big manufacturers' products. There is a long tradition of bicycle repair shops which sell as well as service bicycles. It would be terrible to see the present cycle dealer being further replaced by the supermarkets or big stores with their disregard for the care and maintenance of the bicycle. If some people still believe that the standards were introduced to slow this trend, then the manufacturing majors must look like the real losers. The law permits some small manufacturers to make one-off bicycles and so avoid the costly testing process, but the majors who have embraced the legislation have found themselves still losing sales to the discount non-bicycle store chains who use the SAA stickers to promote their fully imported products.

For some of the big local manufacturers, the whole business has an unpleasant air. Some companies even tried to alter the course of events, only to end up submitting their models for test. As no Australian industry association was active when the standards were being gazetted, there was no easy way to lobby the politicians to consider all aspects of the industry in the final regulations. The result is a huge mess, with everyone blaming everyone else.

Apart from the mentioned shortcomings of the existing standards regulations, there are a number of serious omissions which should be rectified if safety is the real concern. Unlike the British standards, there is no provision for lighting standards despite the parliamentary committee's original recommendations. Also, the present standards require just a rear brake to be fitted. This obviously came from the belief that children's bicycles need only a rear coaster brake. If the standards are to work and to have the respect of the community then it must be recognised that children should have safe machines to ride, too. Any adult knows the rear brake is less efficient than the front brake.

So far the whole standards business has been a big headache, especially for the SAA people, who, it is said, are fed up with the affair. There are even murmurings now of the industry getting together and forming an activist organisation for issues such as this. It is a pity that any such moves should have a negative purpose. Better the industry get together to achieve common goals than to fight a common enemy. If the present mess is not rectified, it could involve flogging a dead horse.



The source of the problem: A chain wheel set with ratios on the inner rings below 39 teeth. The one pictured is no longer available and the ones that are available are hard to get or expensive . . .

TOURING TRAUMA

Since this magazine's bias is towards the touring bicyclist, we thought it was time we looked at how the bicycle industry treated the tourer. As most regular tourers know, the local industry is not really interested in them at the moment. Bicycle motorcross (BMX) is all the rage and production is heavily aimed at that lucrative area. Apart from BMX and other children's bicycles, the main sales push is towards adult city cyclists. Potentially every adult bicycle sold is a touring bicycle.

Why these bicycles do not realise their potential in this respect is mainly because of their inadequate gearing. Most of the adult bicycles sold are steel ten-speeds with gearing most suited to the terrain of Melbourne, Adelaide, Canberra or Perth. These machines are marketed as a sporty and healthful exercise and leisure conveyance. This approach overlooks the other function of the bicycle as a workhorse and a means of efficient personal transport. In an energy-scarce age, the need for cheaper transport and a healthier form of travel will become greater. The bicycle is an urban delivery vehicle capable of carrying rider and luggage over the ridges of Sydney, Brisbane and Hobart as readily as on the flats of the other cities, but what it needs to do this is lower gearing than is generally available. Most cyclists

in these cities would welcome a touring option even on their sporty machines.

So what is this touring option and how does the cyclist get it? Briefly, a touring bicycle is one with wide-range gearing (a low of 27-30 inches and a high of 95-110), a solid pannier carrier rack, comfortable long-distance saddle, toe clips and as much lightweight componentry as the cyclist can afford.

However, getting hold of a touring bicycle or the necessary touring hardware is the difficult part. Unfortunately only a small section of the industry is aware of the new wave of tourists in this country and only a few specialist shops and fewer wholesalers supply the marketplace. With the influence and experience of the US touring market on the Japanese and Taiwanese manufacturers we are likely to see more imported bicycles with touring gears and even fitted racks on sale. Only when these touring bicycles become more readily available will touring become more visible. The swellings of a new wave are with us now. It should be interesting to see who scrambles for the crest in the coming months and years.

A footnote for the potential buyer of a touring bicycle: All the words, touring, tourist and tourer are bandied around when marketing a bicycle. Ask yourself what's in a name and then look hard for the distinguishing features before you choose your future transport.

A new name on quality touring bicycles



CYCLE TOUR

At Inner City we build most of our touring bicycles to order. Seldom two bicycles are the same as each person has their own requirements. Our Cycle Tour bicycles are not just another production machine.

Here are two more options of bicycle. Write or call in for a printed leaflet detailing three other options plus all current prices.

OPTION FOUR

A variation on a theme of a budget touring bicycle. **SPECIFICATION:**

☐ Frame sizes 49.5, 53, 57, 61, 63.5cm, Unisex, all with life time guarantee.
☐ Alloy handlebars and stem (recessed Allen key bolt ☐ Cloth tape ☐ Alloy

cotterless chain wheel set ☐ Steel pedals with reflectors ☐ Shimano or Suntour derailleurs (long arm on rear) ☐ 14-34 freewheel ☐ Choice of gear levers on stem or downtube ☐ Alloy wheels (14 gauge spokes Alloy rims and hubs with bolt up axles) Strong touring tyres and tubes ☐ Alloy sidepull brakes (extension levers fitted free) ☐ Strong pannier type rack ☐ Vinyl anatomic touring saddle ☐ Price \$259.

OPTION FIVE

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SPECIFICATION: ☐ Frame sizes as for option four, Standard tubing, also with lifetime guarantee. ☐ Alloy handlebars and recessed bolt stem (Randonneur bars also available). Cloth handlebar tape. ☐ Alloy cotterless crank set with fully replaceable rings. Usual sizes are 52-36 teeth. Sugino MightyTour type with one piece forged arm and spider. ☐ Alloy pedals with reflectors. ☐ 14-34 Rear freewheel. ☐ Shimano 600EX front and 600EXGS rear derailleurs ☐ Choice of gear levers on stem or down tube. ☐ Alloy wheels with quick release alloy hubs (14 gauge spokes smooth-wall alloy rims). ☐ Strong touring tyres ☐ Alloy side pull brakes. ☐ Strong pannier rack. ☐ Price \$360.



inner city cycles

Don't let the name fool you we're more than a big-city bicycle shop.

INNER CITY CYCLES 27-29 Glebe Point Road GLEBE NSW 2037
Telephone (02) 660 6605

Our philosophy: Inner City Cycles is owned and run by people who are ardent bicycle travellers. We are always happy to share our knowledge of touring and general bicycling with our customers and because we are a small shop specializing in bicycle touring and lightweight camping we can offer you personal attention and reliable after sales service. Apart from the frame warranty we give two free services on all our new bicycles. Occasional maintenance classes are also run by the shop staff as a public service.

The Sydney Bicycle Show 1980

The general disarray of the bicycle industry and its unwillingness to act in harmony were in evidence at what should have been the industry's most important public event, the Sydney bicycle show. The cyclists were there all right, but where were the bicycle manufacturers and importers? How a large multinational company such as Philips can allow its subsidiary, General Accessories, not to jump into such an occasion in a way befitting a market leader may never be known. Perhaps they are doing so well that they don't need the opportunity to push or even display their product.

Bicycle shows differ from other consumer fairs in that the number of new things on display show that basic bicycle technology hasn't improved all that much over the years. Still, people came to admire and to see their means of transport and recreation on display — to buy or plan to buy or to see what others were buying. Perhaps it was a bit disheartening for cyclists to think that an industry should only half support a major public show. Still, most of the companies who did exhibit seemed to feel that the exposure was worth the effort and very hefty expense and would support another.

In Britain the Harrogate Bicycle show is a major event. It's time this country had its own Harrogate and now is the time to start planning for even two years ahead. This would be a much more positive reason for the industry to get together than the standards mess (see accompanying article).

For those who didn't make it, a brief roundup of the event:

The big news was the appearance of BMX (bicycle motocross) on the scene. Though the show failed to attract the large numbers of BMX enthusiasts from the populous western suburbs of Sydney, the sport with its teen/macho image dominated the usually staid, nothing new adult bicycle scene. Some exhibitors realised that mounting a show is more than putting a few bicycles on display and went to great lengths to bombard the senses.

But bicycles will be bicycles and there was the usual *very expensive and highly unusual handcrafted masterpiece* as well as the *dearest, most expensive and fastest*. The cheapest were there but in disguise and went unnoticed except to the informed prospective buyer. If it is true that cycling is a cheap activity for all ages and backgrounds then the admission charge missed its mark and may have even restricted numbers as the wealthy and middle class singles were still outnumbered by families and children (those notoriously poor sections of the community).

After a year or so of supply doldrums, the pannier purveyors have sorted themselves out and have flooded the market with a vast array of pannier types and brands. Good for the tourist, yes. Not so good was the lack of necessary touring hardware and suitable touring machines. Obviously manufacturers don't read their *Freewheeling* and don't realise what a touring bike is. To remedy this anomaly, we are sending them all a copy of this issue in the hope that they will perhaps subscribe and support OUR efforts by advertising THEIR efforts in these pages.

Freewheeling also made its first public appearance at the show. Our contribution was a map display of the proposed Pacific Cycle Trail. Many friendships were no doubt established and subscription worries sorted out and perhaps more Sydney-siders know of our existence.

One of the most encouraging things the show produced was the number of exhibitors of safety equipment such as helmets, vests and reflective materials. All considered, a necessity for urban survival in a motorised age. Still, the full range was lacking, possibly this was because Australia's container ship was rerouted to the west coast of the USA for a bumper summer season.

Even though it has had its critics, the Sydney bicycle show points to the future, if only the industry notices. If the gear freaks or the industry itself felt left out, then it's about time they started knuckling down and getting the next one moving.

LEISURE BIKES

TOURING SHOP



Eclipse panniers in DuPont Cordura nylon, red, blue and orange.

Transcontinental, Nomad, Standard, and Professional rear bags, Supalite front wheel bags, handlebar bags and rear slide-mount carriers.



Full range of Bellwether panniers, seat and handlebar bags and backpacks in red and blue packcloth.

Blackburn alloy racks, front and rear. Strong, light and rigid for worry-free touring.

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the good gear for the touring cyclist from your bike shop



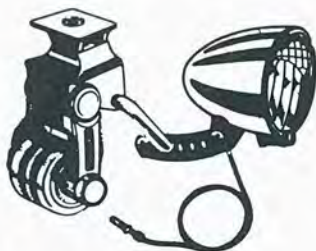
Bell Helmet

America's premier bicycle helmet: over one million in use. Tough lexan shell with ventilation scoops. Additional sizing pads also available. Complete range of sizes.



Anatomic Saddle

A new design with padded *bumps* to provide support. Designed to fit the human anatomy. Two models to suit the individual pelvic structure of men and women bicyclists. Choice of suede or vinyl coverings.



Sanyo Dynapower

Bottom bracket mounting. Works directly off tread and it has less drag than conventional generators.



Phil Wood Bottom Bracket

Fully sealed bearings by well known american manufacturer. Maintenance free . . . fit and forget.



Bata Bikers

The american cycling shoe with stiffened sole. The ideal touring shoe. Available all sizes. Colours: black, blue.



Berek Tail-light

Sensible quality. Cheaper to operate than most battery lights. Uses two D cells. Light body screw fixes to bicycle and reduces risk of theft.



Berek Headlight

The brightest battery operated head light. Cheap to operate: uses D cells. Handy mounting, can be used as a torch.



Handy Tour Tyre

Flexible nylon beading allows folding of tyre into small bundle (the size of a tube). The only way to carry a spare tyre.



Mighty Tour Cranks

Sugino cranks in alloy. One-piece forged spider will accept rings 34 to 54 teeth.



Sun Tour Ultra 6 Clutch

These 6 and seven speed clutches provide *ten-speed* simplicity with *fifteen-speed* gear range. When used with the Ultra 6 chain these clutches make for reliable high performance touring.



Kangaroo Bike Beak

The bicycle carrier that's engineered by bike riders to transport up to 3 bicycles on any car tow bar. Simple to install.



Hantrade Rear Panniers

420 denier nylon. Capacity, 40 litres/pair. Clip fastening to rack for easy removal.



Jecovitol

A medicated ointment for saddle sores. From Holland — the land of cycling.



Safeguards

Bluemels white plastic mudguards with reflective stripe.

SIGNS OF THE TIMES

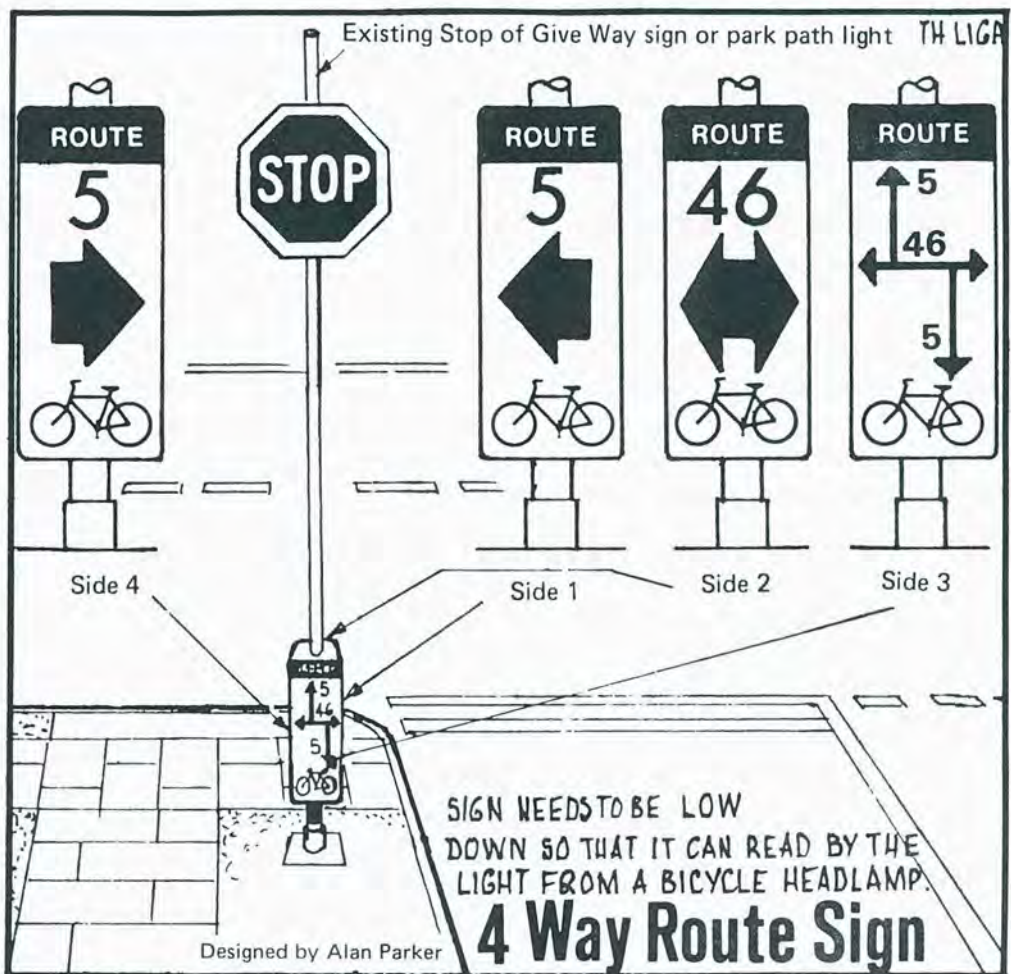
The latest idea in bicycle planning is to litter the streets of Melbourne with 10 000 meaningless signs. The new signs will be more than two metres above the ground and in this position will not be very obvious to cyclists and quite out of the range of a bicycle headlight. The next problem with the signs is that most adult bicyclists will not understand them and virtually no child cyclists will know what they mean. The signs are not clear and there are no words to explain their meaning. Despite all this, it is proposed that the signs go up in Collingwood, a Melbourne suburb.

The signs are based on ones which have proven effective in Denmark, where children receive instruction in their meaning at least three times at school. Also drivers are examined on them when they go for a licence. However, bicycle signs are not in the year-old Victorian road code and there is no evidence of a training program. Alan Parker, research officer of the Bicycle Institute of Victoria, reports that on a recent study trip to Britain he saw similar signs ignored simply because they were not understood.

The signs were prepared by the Road Safety and Traffic Authority and it would not only be a waste, but would set bicycle planning back if the State Bicycle Committee were to promote the signs to other councils in the state. Collingwood plans to put up 100 of the signs and if they become the accepted sign, 10 000 will go up throughout Melbourne.

Most cyclists are children and recent Melbourne research has shown that children are often totally confused by signs and have no idea of their real meaning. In this way, they endanger themselves and bad signs will help to increase the risks children face. The basic mistake planners make is in thinking that bicycle signs need to be like car ones — obvious, easy to read at speed, comprehensible only to the initiated. This leads to tall, expensive signs all over the place. What is needed are unobtrusive signs which can be read by slow-moving cyclists and particularly by young children.

For future reference a good technical guide to bicycle signs is the most recent version of the US handbook, *The Manual of Uniform Traffic Control Devices*, Part IX.



DESIGN NOTES

1. Minimise cost by using existing signs.
2. Use "clamp on" 2 piece metal pressing
3. Street lighting is usually adequate on Side 3 with the detailed information.
4. Street lighting on arterial and sub-arterial roads will be sufficient for Sides 1, 2 and 4.
5. At certain residential route intersections provide light on stop or Give Way signs.
6. Routes for cyclists designated by numbers.
7. Reflective paint as on existing road signs.

Above: Design by Alan Parker for a bicycle route sign to be attached to existing road sign or street light post. Below: The signs proposed by ROSTA with the Bicycle Institute of Victoria's suggested replacements on the bottom row.



The leather fetishist's guide

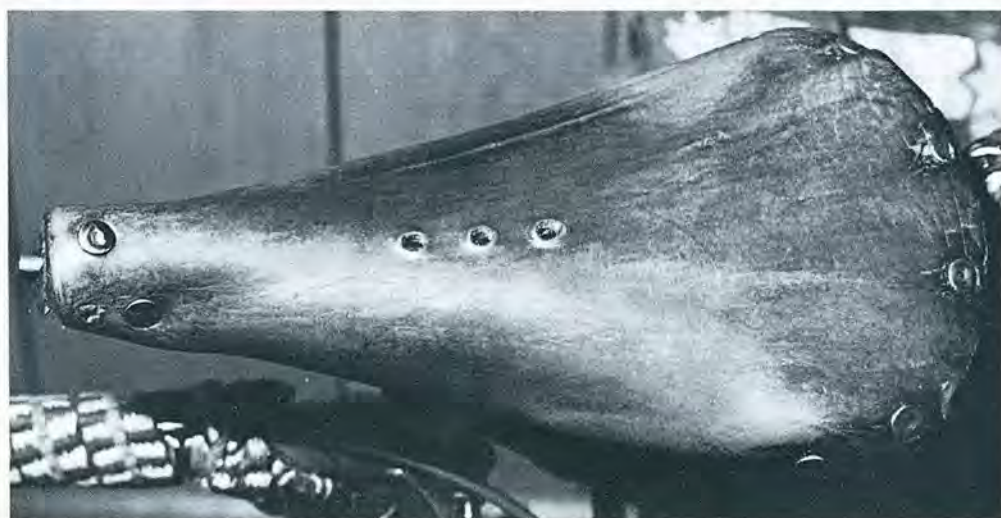
Part One: Building Your Own Bicycle Seat OR My Backside Died For Science.

They said it couldn't be done and after a year of riding around on my Brooks Amateur saddle I'm inclined to agree with them. Seat manufacturers may heave a sigh of relief at this point. Besides looking like it fell off the back of a bullock, my seat has failed fairly dismally in comfort comparison with a seat post.

But to begin at the beginning... with the paradoxical whimsy of many vegetarians I am not averse to having the occasional side or two of heavy bridle leather loafing around the house. After finishing the sewing of a set of leather smalls, whip and jackboots (Primrose pattern No. 43) for the next family picnic, there was just enough former cow left for another little diversion. As a young fellow trapped in that no-man's land between Meccano and girls, and aeroplane glue being such a shocking price, I took to surreptitious leather cycle seat sniffing, as a result of which I now wear glasses and elevator heels. However, spending all that time in close proximity to nature's clothing awoke stirrings and designs within me... and it was these designs I proposed to execute on the remains of the hide (as distinct from hiding the remains).

First I removed the rivets from an old and unkempt Bell saddle - never buy a leather saddle if you aren't prepared to maintain it with regular leather dressing - then I used the old leather as a template to cut out a new seat blank. Here I failed to surmount problem one: how to pick the way the grain in the hide ran. Should you propose to duplicate this experiment ask the purveyor of pre-owned poddy to point out the grain for you "it went thataway". Of course leather may not have a grain, in which case you are going to look a prize greenhorn. Moving swiftly on to problem two, next you will need to know how to shape the leather around the saddle frame at the rear so that differential tension is imparted to the centre and sides so that it will form a nice behind-snuggling curve. There is fortunately a short answer to this: it can't be done without moving thousands of dollars worth of seat shaping machinery into the lounge room.

The procedure in the Brooks factory involves several separate pre-stretching and shaping processes, and a final stretch when the seat is on the frame. Doing this yourself is a tiring, repetitive and hit and



miss procedure. I bought a few dozen 12 mm two-part hobby rivets of the type which can be hammered or squeezed together, and used three to mount the saddle blank to the nose plate of the frame. Six more rivets fastened the blank at the rear. Then it was just a case of turning the nut adjuster at the front to put tension on the saddle. First impressions upon riding were very favourable and I started composing patent applications while riding it on a three-day tour. Riding companions speculated in hushed tones as to why the seat looked like it had some nasty degenerative disease. Admittedly it didn't look too fantastic, but felt quite comfy - the main initial drawback was carrying a back-up seat in the saddlebags because of an initial distrust of the rivet strength. So I dubbed, saddlesoaped and neatsfooted it and cranked more and more turns on the adjuster as the seat stretched... and

stretched - by a couple of centimetres over six months.

The stretch destroyed the nice shape of the seat and prevented it forming a permanent imprint of my nethers, which is of course the secret of the durable comfort of a quality saddle. Finally the adjustment ran out and the seat had to be removed. This also enabled an attempt to level uneven tension on the saddle sides by repositioning the holes. The main current drawback is that the seat sides still cut into the top of the legs on rides over 10 km. But solving these problems gets in your blood... Maybe if the rivets were mounted at the back first, - then the sides might curve more harmoniously.

Oh yes, it would be a help if you could all bring an old Singer treadle sewing machine to class next time... unless you want to see your Bernina die of over-exertion.

to cycle touring

by Doug Thompson

Part Two: Saddlebags

The English have a French name for them - panniers, but to the French these are wicker baskets carried on a donkey, so they call them les sacoches. Whatever they are, cycle bags convert your steed into a working Clydesdale capable of carrying heavy touring, shopping or general utility loads at the expense of lost handling response, nearly doubled wind resistance and twitchy steering on hills if a heavy rear load is not counter-balanced up front, either by front panniers or a handlebar bag. Front panniers are merely a miniaturised squared-off version of the rear bags described here, but as the handlebar bag and its mount are a different design challenge, we will whip up one of those later. Firstly a few remarks on the rationale of making your own cycle gear.

I remember a bicycle advertised locally in the paper which had only one small fault, a broken top frame tube, which the lad who owned it had rectified with the technology at his disposal - wrapping it around with a splint bandage of sticky tape. This was the only viable alternative to an expensive trip to the blacksmith and was an ingenious if not durable protest against the extent to which we are enslaved by a technology which jealously guards its mysteries from us. Fortunately the bicycle, frame breakages aside, is one of the few items of really humane and reliable technology. Unlike the watchmaker with a gear left over, the amateur cycle mechanic finds his machine performs almost as efficiently after a greasing job despite the loss of a few ball bearings under the wardrobe. Lightens the rolling weight too.

A friend spoked up his first wheel in what might be termed freestyle random crossover - each spoke prescribed an unique arc from hub to rim, but the wheel turned and the owner was transported, even without delight. Which is all that any cycle accomplishes, and to what effect on mankind? The first sociological fact I ever turned up about the bicycle exemplifies the answer: in 19th century Italy, the average country boy found his wife within 60m of his front door. With the advent of the velocipede his proposing range increased to an average 200 m. Obviously his grid had freestyle wheels and many bearings under the wardrobe, for these days it is not uncommon to lust after objects of affection across the other side of the city.

To reach the nubbin of the treatise,

how does one put the cyclist back in the cycle? Leaving Flann O'Brien's molecule swapping aside, the only way out of a passive consumer role is to hoe in and start D-I-Y-ing. You won't necessarily save a lot of money, for the time involved in hunting and gathering materials is considerable, but you will, in this instance, end up with some very presentable pieces of cycle software. There is no particular magic in making things, and there is a good chance that the shiny A.J. Gumbo product you have been drooling over in a shop will be decidedly inferior to your own construction. This must be your credo, as it is very easy to doubt one's own ability . . . but enough of cheap philosophy, here are the ingredients for a pair of saddlebags:

Hardware, camping mountaineering and craft shops can supply these items.

Code: Hardware - H; Camping - C; Mountaineering/bushwalking - B; Craft - CR.

Apologies for the Metric/Imperial mix.

One square metre of 1/16 inch leather, colour finish or natural finish straps may be cut from heavier leather - optional) - CR; one metre Superdax (6 ft width) or waterproof equivalent (8 or 10 oz weight) - C; one metre 2.5 cm wide braided nylon belting - B; 48 x 5mm internal diameter eyelets - CR; 12m No 20 braided nylon cord - H; eight 7/8 in D rings - CR; strong 3-ply 60 x 30cm - Wood yard or H; 25 x 10mm or 12mm two-part rivets - CR; heavy-duty braided nylon thread

(e.g. Gutermann Polytwist) - sewing shops; two leather sewing machine needles - sewing shops; four Carr heavy duty Dot fasteners - CR.

Mounting Alternative A: six Moss rope lashing hooks - H; 0.5m thin elastic shockcord - B.

Mounting Alternative B: four 2.5cm D-rings (must be welded variety) - CR; four 2cm buckles - CR; two Carr heavy duty Dot snap fasteners - CR; bridle leather 30cm x 31cm - CR.

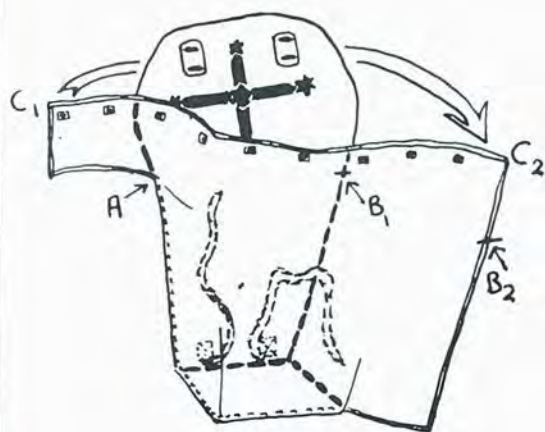
If using a Superdax top flap instead of leather, you will need another 0.33m of material.

Method

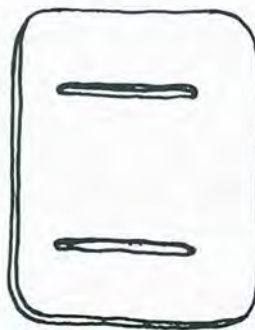
Draw up all plan pieces in leather and Superdax on the side which won't show. Do not make any cuts before checking all measurements. Also draw up four 60 x 2cm straps and four 36 x 2cm straps, in slightly heavier leather if preferred. If using mounting alternative B, cut bridle leather in half to make two straps and cut two other 50 x 1.5cm straps in ordinary leather. Cut short slots for the buckles at one end of each strap, position buckle and mount with a rivet hammered together. If the rivet pin is longer than the doubled leather, snip a bit off with wire cutters.

These bags have a strap system of closure which enables overstuffing of the contents and carrying of bulky items because of the high throat. Zip closures are not as versatile. The straps thread through





Leather strap
slot piece —
full size



A sharp X-acto style knife is needed to cut leather accurately, with a firm support behind it, but before you make any cuts on any of your material, check that you will have sufficient heel clearance by having a friend hold a cardboard template against the rack while you sit on the bike. If there is a problem, ideally the bag should be tapered further as the plans suggest, or you may choose to locate the bags more to the rear of the rack. The latter will be more detrimental to the bike's handling. If you can shrug off the extra wind resistance there is no functional reason why the bags cannot be enlarged widthways for a house-moving potential, because the lacing at the end of the bags gives support and strength to the whole structure.



Side and face of Moss rope lashing hooks



Two-part rivet



Another type of rope hook

a slotted piece of leather sewn to the top flap to be slid back for access to the contents without unfastening the straps. I have deemed outer pockets unnecessary, but if you wish to add them, the drawings may offer ideas. Velcro or zips seem to work best for pockets. Check the plan for any alterations the pockets may entail and sew them on as soon as you have cut and hemmed the Superdux front/side panel. Another alternative is adding welded D-rings, sewn into the seams on leather or nylon tape tabs, to which detachable pockets can be strapped.

After cutting the main pieces and straps, you will need to cut eight leather strap slot pieces and eight leather lacing support pieces (measurements on main plan). After hemming any material pieces, set all eyelets in place using setting tool, eight along the bag top and four in each facing support. Sew two straps and two slot pieces onto leather piece. Add a motif if desired to the bag top flap. Another two slot pieces go on the Superdux piece as do four of the lacing supports, which should be double stitched.

Next the two main pieces are sewn together as shown half-finished in the diagram. Again, all seams are double stitched. Start at A and check and adjust alignment as you go as the leather may stretch more than the Superdux. At B1/B2, bring the rear throat flap round and stitch it to B2/C2. Turn the bag right side out and sew the rear throat flap on



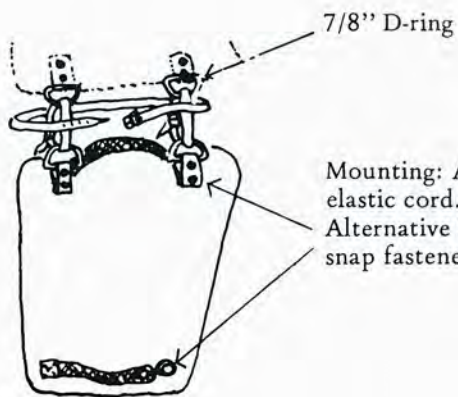
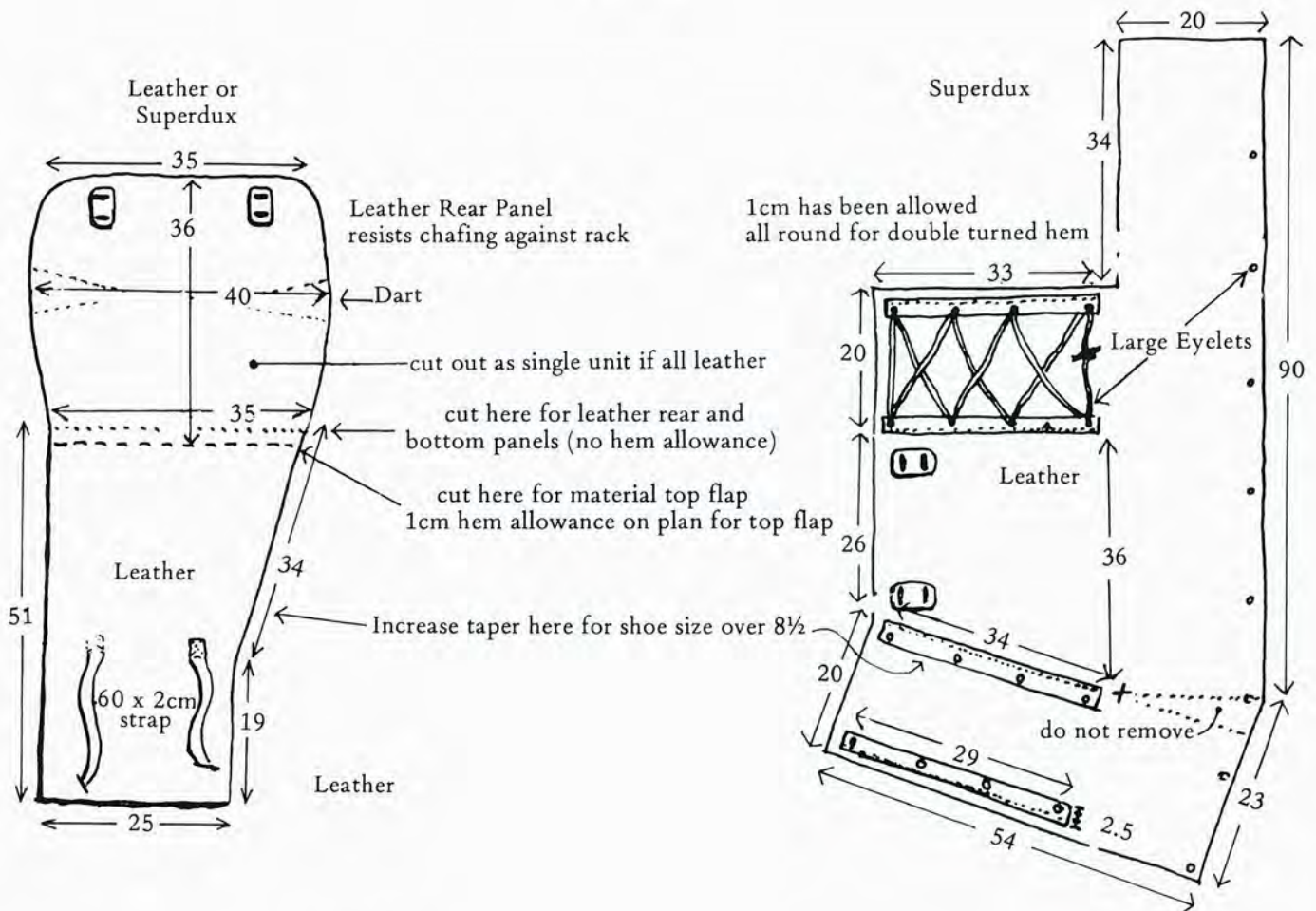
Test run the amazing Trangia lightweight stoves at Inner City Cycles.

In our years of touring we have found portable lightweight stoves to be a valuable addition to our touring kit. Stoves give the cyclist true independence, especially in wet weather or at well-used and woodless campsites (including caravan parks).

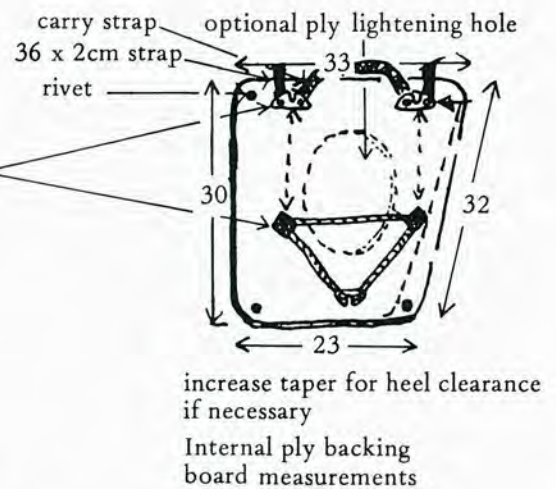
The best we've tried so far is the Trangia methylated spirits stove. It's fast, efficient and immune to the wind problems we were used to with the sometimes dangerous petrol stoves. Metho is easier to get hold of and safer to transport and burn.

When you're next at our touring shop, ask for a pot of tea or coffee made on our Trangia. You won't have to wait long for the water to boil, either.

Plans

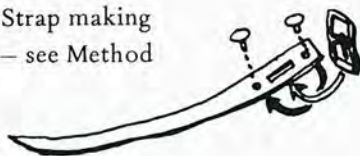


Mounting: Alternative A: Lashing hooks, elastic cord.
Alternative B: D-rings, buckled straps, snap fasteners (straps of bridle leather)



All measures are in centimetres.

Strap making
— see Method





Your head deserves the best

The choice of a cycle helmet has, until recently, been a difficult one with the best imported helmets prohibitively priced and cheaper helmets being of questionable head-saving value. No helmet on the market could pass all the test requirements of the rigorous Australian standard. A Victorian company, GUARDIAN, run by cyclists, started a two-year research program to design the perfect helmet. At the end of that time the sample helmets they submitted to Technisearch Ltd. for technical analysis passed every test equivalent to the Australian cycle helmet standard relating to design and performance requirements.

Because of these excellent test results, the helmet is currently being submitted to the Australian Standards Association for evaluation. It features a harder outer shell

for impact dissipation, an impact absorbing liner, an efficient strap retention system and well-designed venting. The Guardian helmet costs only \$39.90*, despite having a superior technical specification to helmets costing half as much again.

Guardian also researched safety vests, and naturally enough came up recently with a superior product. It is more reflective than the Taft, which Pedal Power recommended in 1978. The reflective strips are heat welded for durability, not painted on, and plastic coated so the vest is still effective in rain. The vest is cut long at the back for maximum reflective surface area, it is designed not to bunch on the shoulders and the strap retention system is very secure. The Guardian Vest costs \$11.95.*

Trade Distribution in NSW, ACT, QLD. John Rae P.O. Box 930 Canberra City 2601. Ph: (062) 48 8464.

*RRP.

its bottom edge from A to B1. This will be a bit awkward as you are sewing inside the bag while pushing unruly view-obscuring panels out of the way. Persevere and swear as required.

So now you are looking at a bag-shaped item which you may wish to relate meaningfully to your bicycle rack. To do this requires a piece of ply (marine ply is preferable) cut to the dimensions shown on the main plan and held to the bag interior with a rivet in each corner. This board quells the suicidal instincts of saddlebags to droop into the wheel and provides a solid base for mounting rack attachment hardware. Mounting alternative A (no jokes, this is a family magazine) suits the Karrimor rack best, with the two top hooks (the metal variety) clipping over the frame of the rack and tensioned in position by a third hook mounted on elastic shock cord. This cord is fastened in a loop through two doubled-over pieces of the nylon belting, which have been riveted about halfway down the back panel (through the ply, too) and directly in the line under the two mounting hooks. These top hooks will be set in place so as to be flush against the insides of the rack crossbars to prevent sliding. Be sure you place them forward enough to give sufficient heel clearance.

The two rivets which go through the holes in each lashing hook also hold on

the carry strap and the top bag straps. Pass the latter through the slot pieces on top flap and rivet two of the 7/8 in. D-rings, looped over the top one and back through the second one when in use. Access is provided by either sliding these straps out of the rings or by merely sliding the slot pieces on the flap up the straps when loading or taking out small objects. To complete the bag, lace the end panels with the No 20 nylon cord (a variety of colours is available) and thread cord through the throat eyelets for a drawstring. Both the cord and the nylon belting should have their ends melted with a flame to prevent fraying.

Alternative B requires two heavier welded D or O-rings mounted on a double riveted loop of heavy leather to the top of the back panel (including stiffener) of each pannier. The panniers are joined by the heavy straps made earlier. Each of these passes through one D-ring on each

pannier and over the rack. A length of belting is riveted or sewn on the bottom of the pannier and passed around the rack to be fastened back on the bag with a heavy-duty Dot fasteners. The extra strap shown on the plan passes over the top strap and under the rack, one to each side, to prevent the bags bouncing at all. This mount system may prove more useful for non-standard rack variants.

If desired with mounting A, two extra Dot fasteners may be positioned on the carry strap so it can be fastened over the rack side bar and clipped back on below it to the bag to provide a failsafe system should the shock cord fail.

Making time? About eight hours per pair. Cost? Because of the high quality materials used throughout, currently around \$30-\$40, about half for the leather.

Next Issue: Toe clip straps and covers, handlebar bag and handlebar tape.



“...maybe eccentric but more interesting to meet.”

by Amanda Holt

In August last year, Michel Geffré arrived from Perth and shared our flat in Sydney for a month. Fellow cyclists in Perth had passed our address on.

It was exciting to meet Michel, who left France on his bike in July 1978, and he reminded us of the bicycle's potential for more than inner-city commuting. Michel cycled across Europe to Turkey and then through India. He flew to Thailand, cycled to Singapore and came by ship to Perth. Early this year Michel returned to Sydney, after five months touring in New Zealand.

With time running short, Michel tried the novelty of hitchhiking on a return trip to Melbourne before leaving for the west coast of the US. Michel gave an interview so that *Freewheeling* readers might also share some of his experiences.

A: When you decided to travel, what attracted you to doing it by bike?

M: Not because it is the cheapest, but the most interesting way. The bicycle will give you independence and a kind of joy, and at the same time put you on the same level as the people of the country you cross.

A: So you found people related to you differently?

M: Sure. I was feeling closer to nature and people than in a car, where you keep yourself in a box. Also, the people found a traveller on a pushbike was maybe eccentric but more interesting to meet.

A: How did the people show their interest?

M: I will tell you of one example. When I was riding to Istanbul I stopped at an inn one night. The inn was full and the innkeeper invited me to sleep in the dining room. Half an hour later two people came by car and asked if they could also sleep in the dining room. They were told “Just go 30-40km on and you will be in the next town”. For me it was different. You never refuse a stranger who is riding a pushbike. It is like travelling in the last century by horse – you need a rest and when night is coming they never refuse to give you shelter.

A: Had you been cycling long before you left France?

M: No. I had a bike as a kid but I bought my bike for touring in June and in July I was already on the road.

A: In which country did you most enjoy cycling?

M: That is difficult to answer because you enjoy cycling for many different reasons. I enjoyed cycling in India because the pushbike gave me communication with the people. In India there are hundreds of people riding bikes – you are only one of many others. I was close to the people in this way. But I also enjoyed the Nullarbor where you feel completely free, you go by yourself and don't care about the nearest gas station. You can stop where you want and choose your own pace. There is a very wide range of feelings on a pushbike. The Nullarbor was a solitary pleasure because when everybody travels by car you don't meet many locals.

There are other pleasures also. In Afghanistan I got a strong feeling of the colour and the people. Cars cross Afghanistan as they cross the Nullarbor. People have been living in the Afghan villages for centuries and when you have biked up a hill or mountain you will find a well where you can have fresh water. This is something you can never experience by car or by bus, 99 per cent of tourists will tell you the water is polluted. It is less polluted than in Sydney.

A: Michel, you once described Turkey as “hell on two wheels”. What happened?

M: Turkey itself is not hell, but the European highway from Greece to Istanbul was a kind of hell. The traffic is so heavy, so dense. Most of the people on the road are going to Istanbul from Switzerland or Germany. They drive back home with bald tyres and they go fast. The faster you go the more man you are. It's a really dangerous road, narrow, bumpy and they drive like crazy. Along the road you smell the decaying carcasses of dogs, cats and goats smashed by cars and lorries – and you try not to be the next one.

A: What have you got to say about your New Zealand travels?

M: Not the most exciting country, but very interesting by bike – and I was not the only one. Last January on the South

Island I saw many people touring. I think it's pretty common and that's a good sign. Not quite the same as in India, but it is good to be welcomed on a pushbike. Kiwis greet you too. People in cities like Christchurch are really conscious of the problems of transportation and they do something about it.

A: Has your style and approach to riding changed since you began in '78?

M: I changed my style as I crossed from Europe to India. When you meet a different culture you have to change yourself. I was slower in India, because of the climate maybe, but also the people around me. Europeans are always in a hurry and I behaved also like a European.

A: Have you sped up again now you are in Australia?

M: Yes, but not as fast as before. It's not that I have more time, but I prefer to go at my own pace, which I have now found after thousands and thousands of



kilometres. You spend a lot of time finding out what is happening to yourself. It's a very personal feeling and now I will go everywhere with this feeling.

A: How did you find hitchhiking to Melbourne?

M: Hitchhiking is faster, but boring, really boring. You find yourself in a box and you cross bush, as I did going to Melbourne on the Princes Highway. There is no smell, there is no sound, you don't feel if there is a tail or head wind, you don't enjoy the flowers. Even when you are dropped off, you don't feel like lying under the trees. You have contact with people — short contact, superficial, but no contact with nature.

A: What are your impressions after cycling in Australian cities?

M: Well I have cycled through four Australian cities — Perth, Adelaide, Canberra and Sydney. I found Sydney the most interesting, but really choked by cars. I will compare Canberra and Sydney because the distance between them is short and the difference between them is great.

In Canberra there are suburbs where most people would enjoy cycling on a Saturday or Sunday afternoon. Everything around looks green and invites you for a little trip — walking, jogging or cycling. In Sydney you have to cope with the fumes — a wide, interesting city, but when you have to cope with the traffic, you feel a little bit afraid. I still preferred to cycle in Sydney. Canberra is not really planned for bicycles at all. When I stayed in Belconnen, a suburb of Canberra, there were cycleways from the shopping centre to the university and back to North Belconnen. But if you want to go to the city, maybe seven or eight kilometres away, there is really only one way — a very large freeway.

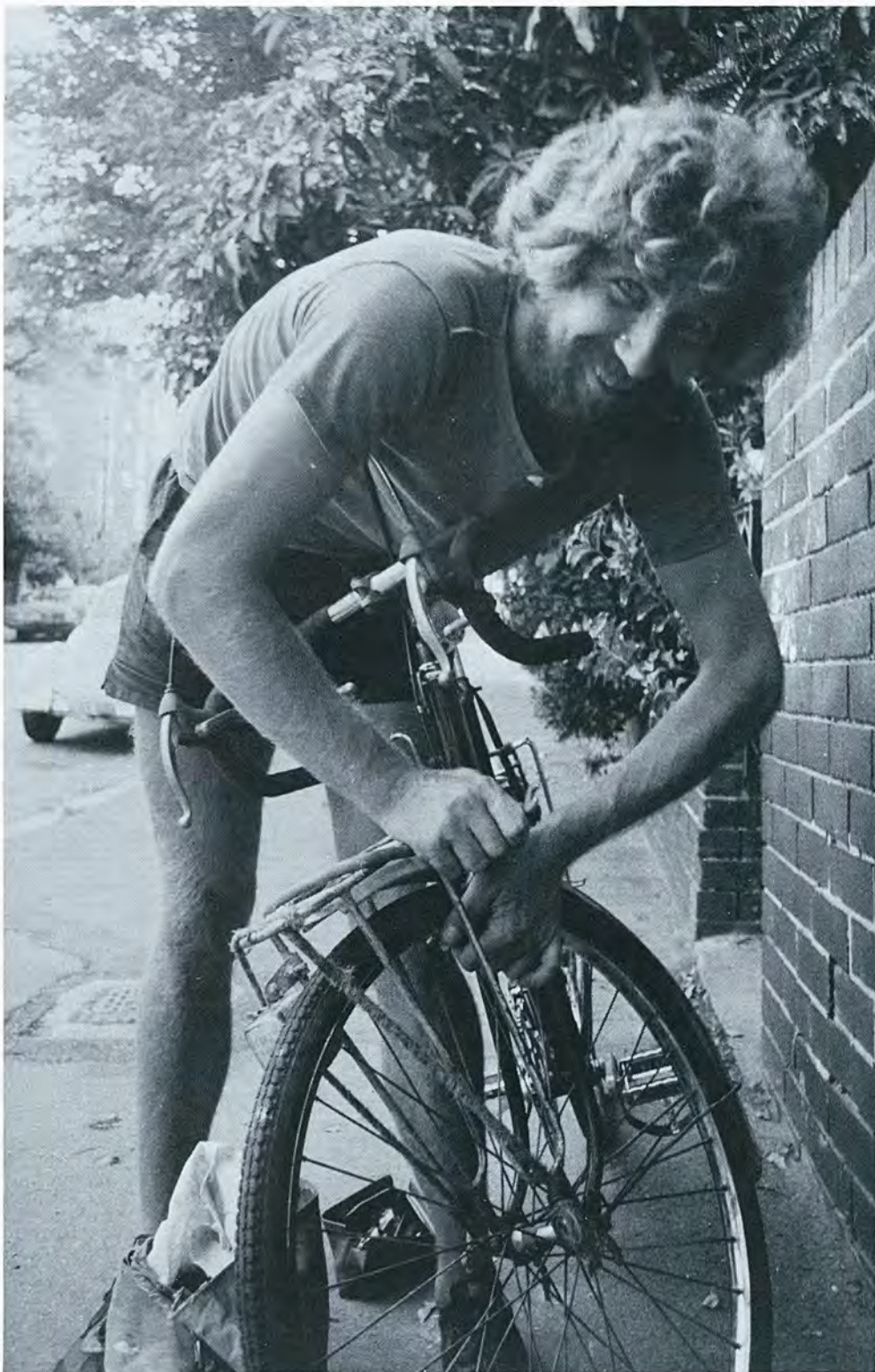
A: Have you found a difference in the attitude of motorists to cyclists in Europe and Australia?

M: Yes. In Europe motorists are more prepared to meet two wheels on the road. When you go for your licence in Europe you must know the rights of bicycle, motorbike and moped riders. In Australia I believe this is not so, especially from my experience.

A: Was it a shock then to arrive in the "civilisation" of Sydney?

M: Yes, it was a shock, but don't forget I belong to Western society. At the same time I am made of blood and flesh, not iron panels and windscreen. I realise that in the streets of Sydney, despite myself I was challenging my own society because I travel by pushbike.

Above: Michel, photo by Neil Jones. Below: News from a recent postcard. Left: Michel in New Zealand.



Hi Folks!!!

San Fransisco is a real "hell on 2 wheels". Istanbul was a nice piece of cake. I never rode before under 4 freeways at the same time and between 2 traffic lanes as heavy as brick walls. Cheer up, this is AMERICA! Michel

The BRIDGE RD. cyclin
c/o AMANDA HOLT

Onward to Cowra

by Ian Taylor and Phil Ireland

Of course one doesn't attempt a journey of the Cowra to Bathurst variety without a strict training routine, after all, 130 kilometres is a long way. Numerous jaunts on the dawn patrol to the nearby villages of Perthville and Georges Plains didn't achieve much, so a hilly 65 kilometre return trip to Newbridge was tossed into the ring, so to speak. Pedalling up to Newbridge station on a Sunday morning, we discovered that no trains were due for several days, so we were forced to ride home to Bathurst on what was left of our legs.

Building on this success, we undertook a gruelling excursion to Oberon around 115 kilometres of punishment all told. Leaving Bathurst at first light, we made Oberon by 9.30 am. There we could be seen making hasty repairs to the hole Mount Oberon had made in our light breakfasts. Lesson one, eat good breakfasts. With steak sandwiches, chocolate and cola on board, we were off on the return trip. With 30 kilometres to go, Phil's front tyre had a massive haemorrhage which proved irreparable. Lesson two, take an extra tube. Phil

graciously consented to wait on a passing lift at the nearby O'Connell Pub. After a suitable wait, Phil's wife did the honours in the family car. Never mind, we were learning fast. Now for the big one. It's Cowra or death!

The proposed route to Cowra was along tarred back roads through the villages of Perthville, Georges Plains, Newbridge, Barry, Neville, Mandurama and on to Cowra via the Walli Road. The chosen day, a Friday morning, clear, 6.30 am saw us underway, armed with supplies of water, chocolate, Staminade and an innocent bottle of glucose tablets. First stop was the Neville general store. After a short stop in this pleasant historic town we headed in the direction of Mandurama. A cool change sent us for cover under the nearest tree as the rain and hail began to fall. Undulating hills of various lengths and grades were taking their toll. We were glad of the rest.

At Mandurama things were going well. With a tyre check and a feed of glucose pills, it was hit the road time again. Crossing the Great Western Highway we hit the increasingly hilly Walli Road, expecting to sight a distant Cowra

from the top of every hill. We journeyed on merrily consuming pills, chocolate and Staminade, heedless of our dwindling water supplies.

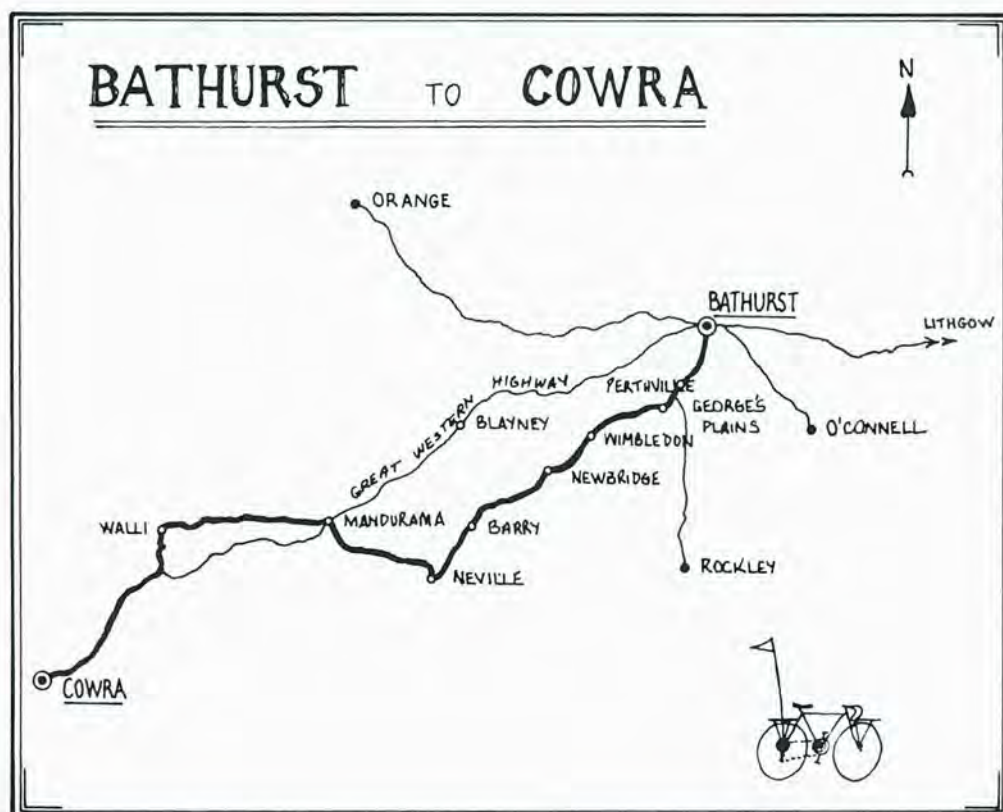
Still 40 kilometres to go, we rode smack into a rising headwind. Thirty kilometres to go and the last of the water and the remaining two dozen pills were divided up between us and consumed at a gulp. A change of route was called for, we were in dire need of some flat ground and a break from the wind. The resumption of the highway satisfied the first problem, but murdered the second — the wind was worse. With the sun well up, things looked grim. Would we be the first humans to "cross the bar" on bicycles?

At the 16 kilometres mark we were doomed explorers. The Burke and Wills of pushbike touring, suffering the early stages of exhaustion and an overdose of glucose tablets. We wobbled into the shade of a roadside tree and struck up undignified poses, flat on our backs! But like all good stories, this one has a happy ending. More than that, it also has a Good Samaritan! What more unlikely person than the proprietor of the Cowra auto wreckers? Swallowing our pride we took bottles of ice-cold water from him. As a result, he now has the saving of two lives to his credit.

The rest is history. We made Cowra Railway Hotel at 2.00 pm where copious quantities of Dr Toohey's exhaustion medicine pulled off the final cure and put the cap on a memorable trip.

How did we get back to Bathurst? Not by pushbike mate! We thumbed a ride on the world's slowest goods train which took six hours to do the trip we had done in eight hours over a longer route. It was with some pain that we mounted the bikes in the goods yard at Bathurst and pedalled off home at midnight.

The roads taken proved to be well surfaced, with the exception of a short dirt stretch near Wimbledon, with very little traffic to break the silence. A liberal sprinkling of interesting small towns and pleasant undulating countryside commend this route to the bicycle traveller heading west. Stay off the Great Western Highway if possible, it's great for cars and trucks but little else. Winter is icy in this area and summer is generally hot and dry, the less extreme months are usually the best value for touring.



Put your bike tour in the picture

by Jim Smith



I feel that there is something unsatisfying about the photographs appearing in our bicycle touring magazines. The quality of the photographs being taken by cyclists does not seem to match the generally good standard of their writing. I looked at quite a few cycling books and magazines and tried to answer the question: "What is it that makes a cycling photo striking and memorable?"

One factor seemed to stand out. The best photos were more than those which showed that the bicycle was actually in

motion. Pictures of stationary bicycles, leaning up against trees and fenceposts can't ever capture the essence of cycling. Here are some techniques we can use to emphasise the feeling of movement in a picture: Have the cyclist's hair or clothing trailing in the breeze. A bicycle on a tilt, e.g. leaning into a corner, has to be moving. Show the dust spurting up from the wheels. Blurring either the background or the moving bicycle is worth trying but it tends to be hard to do effectively in practice.

Almost as important as having this feeling of motion is to show that the riders are actually enjoying themselves. Show them as human beings, not vague outlines. Have the rider's face showing if possible. Pictures of relaxed smiling tourers make a great contrast to the grim photos in racing magazines. The sweating, agonised, contorted faces on those speed merchants are a world away from the peaceful rhythms of touring. In contrast to the individualistic competitiveness of racing cyclists, touring

cyclists interact and co-operate. Photograph cyclists talking, looking at each other or sharing an interesting moment.

Our senses react most sharply to the unusual. The standard touring photo shows a scruffy young male on a non-descript piece of road with a few trees thrown in for background. Anything which shows more imagination than this has a chance of being more interesting. All sorts of people ride bicycles. Why aren't there more photos of women, older people, children and businessmen in suits riding their bicycles? Off-road cycling is a whole field in itself. This is my own particular interest. I like to show bicycles in unusual places, such as sheep paddocks, bushwalking trails, beaches, snow fields, crossing rivers or being carried down a cliff. Try different angles. Rather than the standard eye level shot, try photographing from ground level or climb a cliff and photograph the cyclist below you.

Getting that third dimension of depth into the picture is important. The commonest technique is to have a foreground and background as well as your cyclist, putting three apparent levels into the picture. The foreground can be a framing tree or rock or another rider. Vary your

backgrounds. Pedestrians watching the cyclist or other forms of transport such as trains, boats or horses make unusual backdrops.

The background can be the road ahead stretching invitingly into the distance or the obstacles to be encountered. I have been trying for a while to take a photo which emphasises the smallness and vulnerability of the cyclist against the rugged mountain environment of my home territory. A trick here is to use a telephoto lens which will make the background cliffs or trees loom higher than they would appear with a normal lens. To get it all in focus you will need a large depth of field. This means using a high-speed film, i.e. more than 100 ASA. Remember when shooting in black and white, many pictures will fail because the rider will be camouflaged against the background.

There is a place for photos of aspects of touring other than the cyclist moving through the environment. We can show the rider in the act of changing gears, drinking while riding, mounting and dismounting, resting, adjusting saddlebags, engaged in maintenance or even scratching. But these types of shots need something extra to prevent them from becoming banal. Bicycles have other uses

than just carrying people. Photograph unusual loads and uses for bicycles. Some cyclists take their pets with them or have ingenious ways of carrying awkward luggage.

To capture the enormous variety of cycling situations, just what is the best camera? In my view it would have to be the Nikons. Although it is designed for underwater photography, it works just as well on land. Many photographers engaged in outdoor work prefer it to all others. It is made of steel and the waterproofing seals also make it vibration and dustproof. Its extremely robust construction means it is always ready for action. Its wide-angle lens is the best for all-round work if you must use only one lens. In the touring situation there is rarely opportunity to change the lens in time to capture those fleeting moments.

Unfortunately the price of the Nikons (more than \$400) puts it out of the range of most cyclists. You can take your good single lens reflex camera out on tour if you have a hard leather case. Friends of mine have brought their Pentaxes back in one piece from some pretty rough trips. In the same way that you can go anywhere on a Speedwell three-speed bike, you can take excellent cycling photos





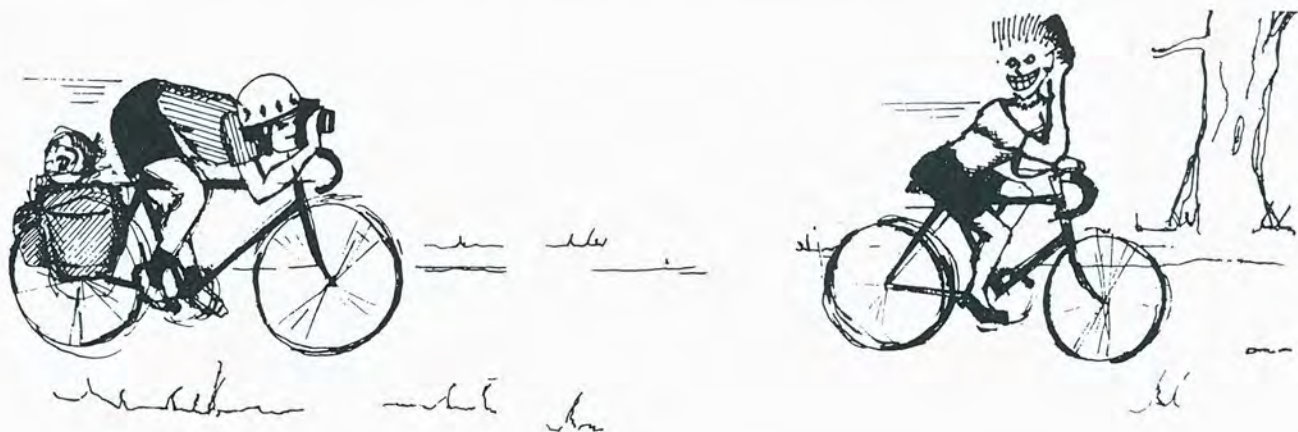
with the simplest of cameras. In the middle of the range, a compact Ricoh 35mm camera at about \$80 would be a compromise which will give you reasonable flexibility. The camera should be around your neck, not in the saddle bags. You may have to shorten the strap to get a comfortable length. My camera sits near my armpit when not in use. As you are photographing a moving object, a shutter speed of 1/125 second is a maximum. Again here the high-speed film will give

you more flexibility.

So, the challenge is there to take photos which show the joy of cycling. Put a camera around your neck next time you go touring. And don't forget to take a friend, it's very difficult to photograph yourself riding. The technique I use is this: I ride several hundred metres ahead of my companion and look for good positions to photograph from. When I find a likely spot I wait for my mate to go by and take my shot. He or

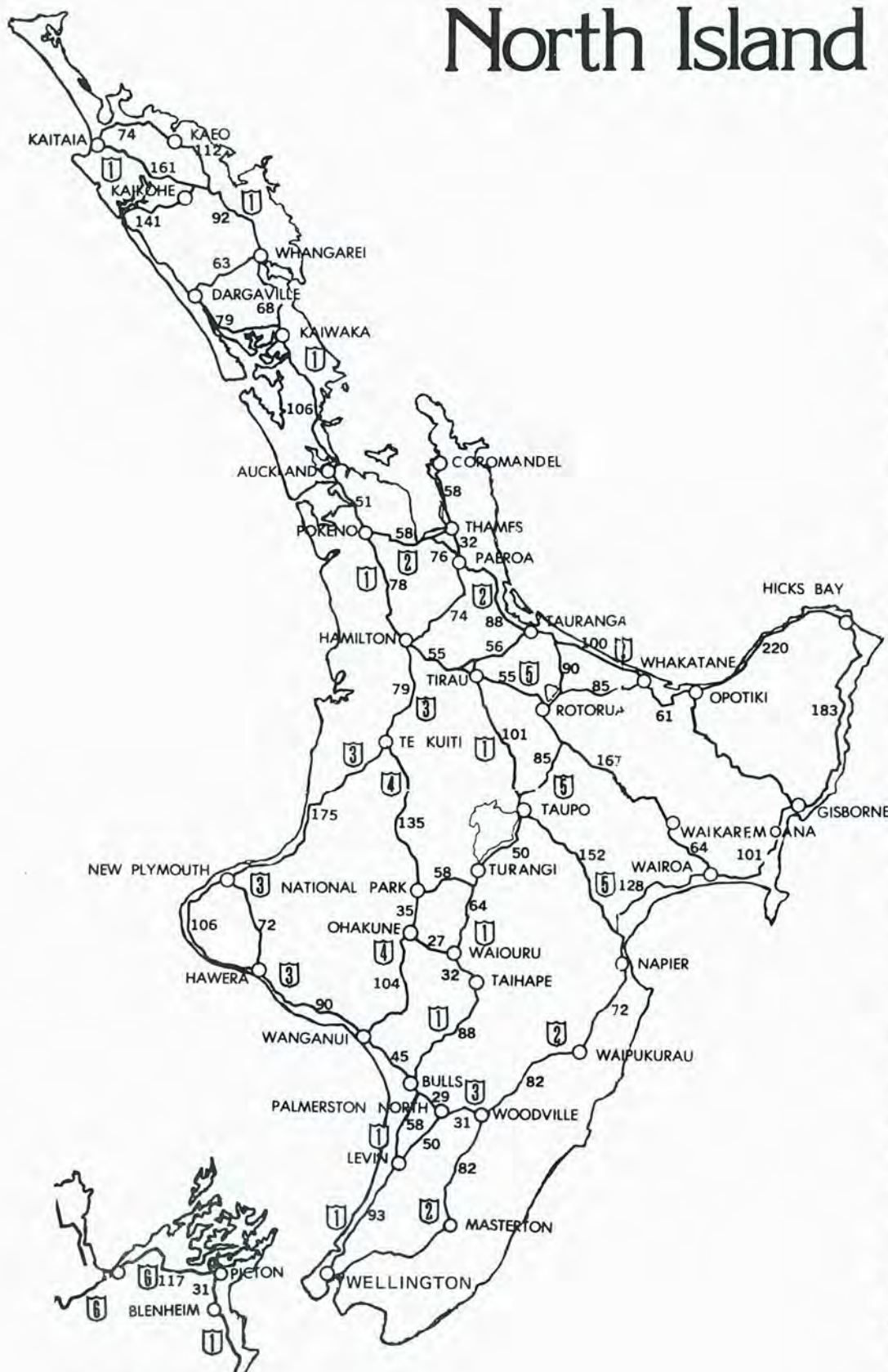
she keeps on riding and finds a good spot to get a picture of me. And so we leapfrog along. Photography taken this seriously does come to dominate the ride.

One last tip: Use plenty of film. In any form of action photography there are many hit or miss factors which cannot be evaluated until the film is processed. Use up as many rolls as you can afford. If you get one picture which is worth publishing in *Freewheeling* from a roll of 36, you are doing well.



Touring by bicycle in NEW ZEALAND

North Island



In January 1980 Mark Cherrington and Janene Porter toured part of New Zealand's North Island. Like many other Australians they found it easy touring in a cultural environment very close to their own. They covered nearly 600 kilometres along a not-too-difficult route chosen mainly to fit in with plans to meet friends and relatives.

We took two custom-made 10-speed touring bikes fitted with rear racks and panniers which were quite adequate for our gear: basic clothing, a two person tent and a minimum of cooking equipment. New Zealand's notorious rain fell only at the very start of our trip. February would be a much better time for touring there, when there is less rain, more sun and the crowds of holiday-makers we were obliged to share the road with have gone home.

We flew both ways on Air New Zealand DC8 aircraft. The airline asked us to take off the pedals and front wheel which had to be tied to the frame, turn around the handlebars, deflate the tyres and wrap the bikes in cardboard. We carried the lighter two of our four panniers as hand luggage so that the bikes and the other two panniers would be under the 20 kilogram weight allowance. If we had exceeded this weight allowance, it would have been fairly inexpensive to send the bikes over as unaccompanied freight at 63c per kilogram, the rate for sporting goods.

We had no problems transporting the bikes either way: NZ customs, once told the bikes had no mudguards, investigated no further and Australian Customs made only a cursory check.

We took our bikes from Auckland airport by car north to Manly, where we spent Christmas.

Our first day's ride of 42km was from Manly, on the Whangaparua, south again to Auckland. We found it hard going, especially on the 15km from Manly to the main road because of steep hills, headwinds and driving rain.

Accustomed to carrying little weight in Sydney, it took us some time to adjust to our full panniers. As the weather brightened further south and the road levelled out, we maintained a better pace. There are two routes south to Auckland from Silverdale, where we joined the main road. One goes through Albany and

approaches Auckland via the motorway and the harbour bridge, on both of which bicycles are prohibited. The other, the Eastern Bays road, follows a ridge then descends to Devonport where we caught a ferry across the harbour to Auckland city.

Main New Zealand roads have a white line along the shoulder to indicate to traffic exactly where the edge is and the gravel begins. Usually there are a couple of feet of tar to the left of this, which we used in heavier traffic. The advantage was that car drivers could gauge exactly how much room they needed to pass us. The disadvantage was that where this extra tar disappeared, became pitted or turned into gravel we would have to watch carefully to make sure we had enough room to move back onto the road.

We found the road excellent until we reached Auckland's northern suburbs, where it became much more uneven because of heavier traffic. The surfaces we travelled on almost without exception were the rough gravel-bitumen type, except in towns and cities where the smoother tar and lack of friction were a welcome relief. We had a fast downhill ride through Takapuna, full of holiday-makers, to Devonport with old weather-board houses, typical of New Zealand, and its hulking ferry shed.

The ferry service was hardly satisfactory; no timetables, infrequent crossings, and expensive \$1.15 each and 60c a bike for a single 15-minute trip. It has probably fallen victim to Aucklanders' predilection for the motor car which NZ's high petrol price (about 54c a litre) has not yet affected. Because of this, bus services are limited and under-patronised and train services run to few areas and don't exist on public holidays!

After spending a night in a pub near the wharves and indulging in a welcome sauna at a rather shady Japanese bath house, we rode with very little trace of soreness out to the airport at Mangere to see some friends. We rode through the university and domain, along Broadway to Manakau Road and over the Manakau Bridge. This was a mainly flat ride in pleasant sunshine with Auckland motorists much less aggressive than their Sydney counterparts. We felt safer because of the city speed limit of 50km/h and the generally lower traffic speed.

After an easy ride from Mangere to Papatoetoe, on Great South Road, we struck the hardest task of the day: finding a bus to take us out of Auckland's built-up area. We'd rung NZ Railways (who also run bus services) earlier and confirmed that their buses would take cycles, but none of the drivers we flagged down was willing to. Finally at about 6pm, a Newmans Bus Service driver took pity on us and dropped us 5km past the end of the southern motorway at Pokeno, at the bottom of the notorious Bombay

Hill. We later decided we would have been much better off riding out of Auckland on secondary roads via Pukekohe, or even on the Great South Road beside the motorway, with the added thrill of descending the Bombay Hill.

Pokeno is a one-horse town just south of the main road turnoff to the east coast we wanted to take. A friendly but misinformed inhabitant told us we could camp on a riverbank reserve 5km south at Mercer. Unable to find such a spot, getting hungry and tired as it got dark, we asked at the local dairy (NZ term for milkbar) and were generously offered a camping spot on a nearby farm. The rural scene formed a sharp contrast with the garishly lit Mercer power station across the way. We only rode about 30 kilometres; it pays to be more organised.

Next day, covered in mosquito bites, we followed the Waikato river north again to Pokeno, and took a picturesque short-cut on a gravel road, where we met a rather fierce goat, across to State Highway 2. This was crowded with holidaymakers, cars trailing boats and caravans; a Saturday exodus from Auckland. Disconcerted by the volume of traffic we took a side road across to Kaiaua on the Firth of Thames where there is a reasonable camping ground. This diverted us from our south-easterly route to Tauranga but made a shorter day's journey while we were still getting into condition, rather than continuing on to Paeroa.

The road from Highway 2 to Kaiaua was quiet and undulating, between sheep and cattle studs. After a long shallow hill we finally saw the sea, a welcome sight in the still heat. We rode down to the hotel beside it, had fish and chips and beer then rode on to the camping ground. I had to wear socks on my hands when they became very sunburnt; this was our only discomfort. The Firth of Thames is a large shallow bay, its pale marshes sheltering both native birds and ill-fed sheep.

I had a puncture as soon as we set off next day, which was easily fixed. The ride was uneventful to Miranda where we stopped for an hour for a hot swim in the thermal pool which eased our tired muscles. We covered almost 60 km (a step up from 47 the day before) through Waitakaruru and Turua: the famous dairy country near Thames. The roads were completely flat and straight with the slightest bend or hill an agreeable diversion. Our average of about 12 km per hour would have been greater without the headwind. We met Highway 2 again at Netherton and stayed at Paeroa that night. The council camping grounds there are next to the railway line (the only train passed us the next morning) and have no facilities.

Camping grounds in NZ are called motor camps and most are included in an Outdoor Guide put out by the Auto-

mobile Association — the equivalent of the NRMA or RAC in Australia. This Outdoor Guide is well worth getting, although you have to be a member (or know one). Most camping grounds have good facilities, but because of the time of year tended to be rather crowded with people, many of whom could not believe that our pup tent could accommodate two people, or bikes a satisfactory means of transport. Cabins and caravans with varying facilities can be hired.

Paeroa is renowned for its mineral waters which are bottled with lemon: at the centre of the town there is a huge Lemon and Paeroa bottle a la Big Banana.

Leaving there we travelled through very different country. Hilly and cool, the Karangahake and Athenree gorges, with their pine forests, fast-flowing streams and waterfalls are on each side of Waihi, crowded with people from the surf beach nine kilometres out of town. We opted for a comfortable night in a caravan at Sapphire Springs six kilometres south of Kati-Kati, and another hot swim, the joy of the weary cyclist. We were feeling much fitter by this time and travelled 55 km, a comfortable day's journey for us.

On our sixth day we rode 52 km from Kati-Kati to Papamoa via Tauranga, through orchards and market gardens. We gorged ourselves on stone and berry fruit which was right in season and very cheap. We also ate a great deal of ice cream; you can see the fruit in it. Dairy products are worth buying; manufactured goods, canned foods and meat are about the same price as in Australia.

After lunching in a tearoom in Tauranga (NZ can be very English) we caught a ferry across the harbour to Mount Maunganui. We failed to appreciate fully the salty scene because the captain insisted on putting our bikes, unsecured, on the sloping ferry roof and we were





relieved to alight at the Mount. This is a caravanners' Mecca with Gold Coast tendencies: long golden beaches, life savers and the seeds of commercialism growing fast. We had to travel to Papamoa before finding a clear space big enough for a tent, in a motor camp almost on the sand with very little shelter. We were, however, succoured by

a Dutch potter who made us coffee and chocky biscuits and entertained us with tales of Indonesia and life in a NZ timber town.

Mark had hit a pothole on one of the many hills approaching Tauranga, so we had to stop at Te Puke next morning to mend three broken spokes. Most country centres in New Zealand have a combined

motor and cycle store. We spent the morning with friends there then rode on to Rotoiti in the hottest part of the day, climbing 300 metres through oppressive pine forests. Timber is one of New Zealand's main exports and much of the North Island's centre is covered with rows of pines, a great contrast to the native bush, so varied in colour and growth, with hundreds of tree ferns in wetter areas. Although we only covered 40 km, this was our most gruelling day with two long steep climbs and a great downhill run in the middle almost worth the loss of altitude.

Our campsite that night was on the shore of Lake Rotoiti which is next to Lake Rotorua. Our much-needed rest was disturbed only by a hedgehog, common in New Zealand, who made a tunnel in our loaf of bread. We usually only carried muesli, bought our lunch and ingredients for tea. We carried a very small kerosene-burning Primus, preferring that to wood hunting or sharing a crowded motorcamp kitchen.

A sulphurous smell heralded Rotorua next morning. We'd both inspected the thermal wonders before and pressed on through curious dome-shaped hills along the main south road to Taupo, which climbed and wound to the Wairoa turn-off then dropped suddenly. We had a glorious down-hill run as the Central Plateau opened out before us, and stopped at Golden Springs, a very pleasant motorcamp half-way between Rotorua and Taupo. It had mineral baths and a wonderful spa with hot creek water diverted to run through a spout onto tired backs. We made 70 km that day aided by descending contours and faster speeds.

Wearied by the noise and air-disturbance caused by the logging trucks, we decided to take a back road via Reporoa and Broadlands to Taupo on the following day, our last. Dairy and sheep farms were succeeded by more forestry with glimpses of Taupo's line of "steam". This is a line of thermal activity marked by hot streams and vents of steam culminating at Wairakei, 9 km away, where there is a thermal power station. We saw bubbling mud pools and roaring steam jets near here, as well as at Tokaanu on Lake Taupo. As there was no dairy in Broadlands we were forced to eat a miserable lunch of muesli and water, liverwurst and honey! The heat, the gradual climb up to Tauhara (an extinct volcano behind Taupo) and the lack of signposts made us a little despondent, but once a "Taupo 3 km" post and an orchard appeared, our energies were renewed and we enjoyed the downhill run into Taupo itself. Mainly a holiday resort, its population swells to 50 000 in summer. To rest in my cousin's house there was most agreeable after nine days' solid riding.

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Mount Egmont

N.Z. Contacts

The list below was supplied by *Southern Cyclist*, a New Zealand magazine published every second month by the Dunedin Cyclists' Coalition. Whether you want to tour New Zealand soon or not, it is full of interesting and informative material on touring and activist issues. The high standards of the technical reports and reviews gives us something to strive for in *Freewheeling*. A full list of club contacts appears in each issue.

Contacts

Christchurch, Horizon Holidays, 188 Clarence St., Riccarton, P.O. Box 8255 Christchurch, phone 48-9971.

In Australia, Horizon has offices in all mainland state capitals (in Adelaide it's the NZ Tour Wholesale Co., and in Perth it's VU International).

Auckland Bicycle Association, P.O. Box 5890, Auckland. Phone: Keith Salmon, 48-9233.

Auckland Cyclists' Touring Association, c/- Arthur Sharp, 6 Wesley Ave, Mt Albert, Phone: 86-9058.

Bicycle Association of New Zealand, 50 Overtoun Terrace, Hataitai, Wellington. Phone: 86-1208.

Canterbury Cyclists' Association, c/- Environment Centre, P.O. Box 2547 Christchurch. Phone: 79-2257.

Canterbury Recreational Cycling Club, PO Box 25109, Victoria St, Christchurch

Dunedin Amateur Cycling Club, c/- Dave Bridgeman, 163 Hillhead Rd Dunedin. Phone: 87-1097.

Dunedin Cyclists' Coalition, 20 Gillespie St, Dunedin. Phone: 73-8227.

Ecology Action, Hawkes Bay, c/- Mr. D. Hornblow, 349 Westminster Ave, Napier.

Gisborne Cycle Tour Group, c/- Grant McAlister, 35 Lyndhurst St, Gisborne.

Otago Bicycle Touring Club, c/- Martin Cox, 33 Tolcarne Ave, Dunedin. Ph: 74-1072.

Rotorua Cycling Touring Club, 23 Grey Street, Flat 3, Rotorua. Phone: 85-407.

Wellington Cyclists' Association, c/- Jane Atkinson, 18 Taungata Rd, York Bay. Phone: 68-4972.

Wellington Cycle and Touring Club, c/- Sean Mulcahy, 50 Overtoun Terrace, Hataitai. Phone: 86-1208.

Touring Bicycle Hire

If you wish to start your tour from Christchurch you can hire a 10-speed bicycle from \$6 daily or \$30 weekly from Horizon Holidays (compared with their car prices of from \$32 to \$65 plus petrol per day). This fee includes two rear panniers, water bottle, toe clips, tools, puncture repair kit, spare tyre and tube, lights, padlock and chain, touring maps and camping ground directory.

Although all bikes are hired from Christchurch, they may be left in any city, the hirer paying the freight back to base, approximately \$5 from Dunedin and \$7 from Auckland. The deposit of \$20 per bike is refunded on the return of the bike in good condition. Special rates apply for hirers of two or more bikes. Excess luggage is stored in safe custody at no charge. A travel pack of tent, air mattress, cooking and eating utensils which packs into the panniers may be hired for \$4 a day.

Accommodation

Camping and cabin grounds: Most average sized New Zealand towns have motor camps which provide cabins at \$2.50 to \$5 per person per night and campsites at \$1.50 to \$2 per person per night. The grounds have communal kitchens, showers, toilets, laundry facilities and some

have TV lounges. For information on cabins and camping, send for the Official Directory from The Secretary, Camp and Cabin Association, 23 Waitahanui Street, Taupo, NZ.

Youth Hostels: Join the Youth Hostels Association in Australia before you leave. The New Zealand Youth Hostels Association promises good kitchen facilities, plenty of hot water for showers and good company. One limitation is the opening and closing times – everybody out between 10am and 5pm and lights out at 10pm can be a bit hard to handle when you're in a holiday mood.

There is also a limit of three consecutive nights in any one hostel. Towns and hostels are generally spaced at comfortable riding distances and an overnight stay costs \$3 (less if you are under 18). To become a member, contact YHA in your capital city, send a passport photo, and a joining and first year's membership fee of \$18. Annual renewal is \$12 and for 75c extra, they'll send you a list of all youth hostels in New Zealand. Membership is cheaper for juniors.

Home Hospitality

All over New Zealand there are people on farms, in small towns and cities who welcome you as a paying guest in their homes. If you are interested in this idea, write to Home Hospitality, PO Box 309, Nelson, NZ.

Reciprocal Hospitality

An address exchange list began in Dunedin last December. It isn't fully established as yet, but if you would like to offer hospitality on a reciprocal basis to fellow cyclists, you can receive the next amended list by sending a self-addressed envelope with a money order or international reply coupons (from your post office) to cover the postage, to Accommodation List, 20 Gillespie St., Dunedin, NZ.

BOOKS

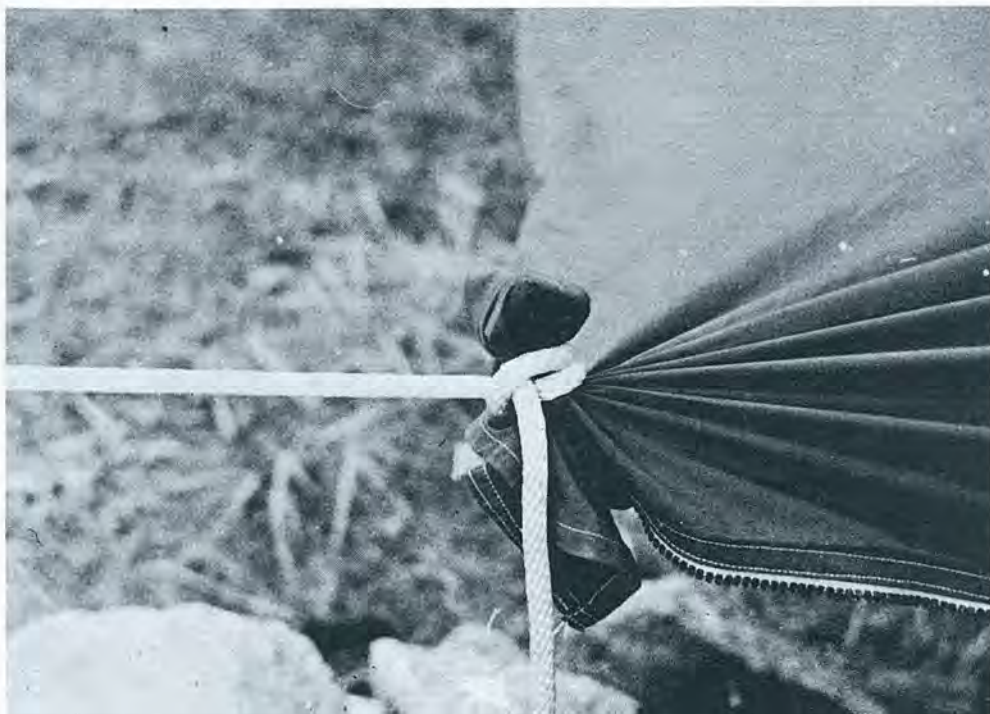
Reviewed by Wilf Hilder

Freewheeling: The Bicycle Camping Book by Raymond Bridge, Stackpole Books, USA, 1974. 192 pages, illustrated, price around \$6. Highly recommended for beginning bicycle tourers.

In the wake of the great American bicycle revolution of 1971-72 has come a deluge of bicycle books, but books on bicycle touring have been surprisingly scarce. Raymond Bridge's book is a bit dated and written for American conditions, but is well worth reading for the excellent advice and helpful hints which make touring and camping so much easier and more enjoyable. His approach is to simplify the camping procedure as much as possible and suggest the best inexpensive ways of buying or making your own camping equipment for bicycle touring.

Raymond gives excellent advice on choosing a campsite, setting up camp, lighting a fire, cooking stoves of the small billy size, sleeping comfortably, what to wear and so on. Next, he deals with choosing a sleeping bag and tent or tarpaulin — good advice from a most experienced lightweight camper and much of it applicable to Australian conditions.

The touring bicycle is the next chapter and is good basic information on selecting a suitable touring bicycle, but I believe the gearing section is rather poor. Loading the bicycle and the art of riding and special riding conditions are the subjects of the following chapters — more excellent information here. The final chapter is planning a bicycle camping tour — written basically for US readers and not much help to us. A very worthwhile book, highly recommended for beginners.



Raymond Bridge's book contains many practical hints for the cycling camper. Above: Using a stone to provide a tie point on a tarpaulin. The method can be used with plastic tarps as well.

Bicycle camping and touring in Australia is nearly as old as the bicycle and it is not generally known that lightweight camping gear, food, clothing and maps were developed by bicyclists in the 80s and 90s of the last century. The first bushwalking clubs, Melbourne Amateur Walking and Touring Club (1894) and the Warragamba Walking Club (Sydney 1895)

used this equipment until 1930 when Paddy Pallin started making specialised bushwalking gear. Only a few years earlier, military maps started to replace bicycling maps drawn by George Broadbent (Victoria) and Joe Pearson (NSW) and used by all road users, including walkers.

The Second Two Wheel Travel Bicycle Camping and Touring, edited by Peter Tobey, Tobey Publishing Co., USA, 1974, large format, 192 pages, illustrated, price around \$8. An interesting, but out-dated book.

This book was originally written in 1972 and is very out of date in many ways. Riding techniques is the first chapter and its complex approach — counting your heartbeats etc is enough to put you off touring for life. Ankling — that mythical method of pedalling is recommended in this chapter but has been exposed as impossible for some years now. As you might have guessed, this book's approach is verbose as well as complex. The most useful chapter is body maintenance and repair (first aid). This section is at least decorated with sub-headings, but in view of the size and weight of the book, you won't take it with you, so at best it's background reading.

FREEWHEELING 40

There is a well-written chapter on magazines and books, but unfortunately all the books have since been revised and the leading magazines have been amalgamated or sold, so most of this information is completely out of date.

The section on bicycles starts off on derailleur theory — rather dry — and is followed by a comprehensive review of derailleurs of the 1971-3 era. The reviews seem sound but for the endless Campagnolo syndrome which has affected the author of this chapter. More theory, this time on gear ratios and some recommendations followed by a review of panniers of the era — good but very out of date and covering mostly US brands.

Tyres come next, but really only singles are covered in detail. They are followed by brakes, theory, and a detailed review of brakes of the era laced with propaganda for Campagnolo. Pedals are treated similarly. At least the chapter

on saddles and seatposts was written by a woman who understood the need for a special saddle for female riders — almost unheard of in 1972. Seat posts are reviewed in detail, but of course there is only one excellent one made by — one would believe — relatives of Michelangelo and Leonardo da Vinci, mass-produced Italian masterpieces in fact.

The next useful chapter is on tents and tarpaulins — rather out of date as it refers to discontinued US models. Much the same thing can be said of the chapter on sleeping bags, but at least the theory is still current, which is more than can be said for the backpacks sections. Stoves come next — rather good even though outdated. Food is next — the packaged, dehydrated stuff is all US and pre 1974, but the recipes are good, though limited in range. Stews and desserts (apart from pancakes) don't rate a mention.

BOOKS

Bikepacking For Beginners, by Robin Adshead, Oxford Illustrated Press, Britain, 1978, 86 pages illustrated, price around \$10. Poor value, not recommended.

Robin's approach to the subject is lightweight camping and touring, but he doesn't appear to consider cost very often, judging by his recommendations. Tents, sleeping bags and stoves are fairly well covered, but in Australia only the stoves are available in quantity. Numerous illustrations mean that there is rather brief text in many parts of the book.

Clothing is quite well covered, but the author has not heard of Gore-Tex rainwear. It is rather ironic that safety helmets are not mentioned or recommended in this book, which claims to be up to date. Selecting the touring bike is essentially recommending a custom-built frame from a leading British builder. The recommended chain wheels of 40 and 52 teeth coupled to a rear cluster of 14, 17, 21, 26 and 32 teeth, which gives eight usable gears and a nightmare of three double shifts (changing front and rear derailleurs together). This gearing system also gives three very close gears,

thus reducing his effective ratios to six by abolishing the double shifts. Robin's favourite touring combination is a 15-speed with chainwheels of 50, 40 and 32 coupled to a cluster of 13, 16, 20, 25 and 31. There are, thank heavens, no double shifts with this combination, but with five gears almost duplicated, Robin is left with only seven usable gears. In a book of this price and brevity, one would expect good advice, not this sort of rubbish.

The rest of the bicycle components are covered briefly without sub-headings or an index, which makes it a bit hard to refer to them later. Much of the advice — such as steel wheel rims with notches for better wet-weather braking — has long been superseded. Loading the bicycle is next, but this chapter is much more believable and compares the Karrimor equipment with the best US panniers which are available in bicycle touring shops in Australia.

The next chapter is on riding, and as the author recommends the antiquated ankling technique, he has a lot to learn. He passes on a few well-known hints which are obtainable in other books for

much less money, for instance *Freewheeling* by Raymond Bridge.

Touring is the last chapter and it is well written with a nice style and plenty of useful hints. It is written mainly for the British, although there is some food for thought in Robin's comprehensive winter and summer gear lists and their illustrations.

This book is absurdly overpriced in view of its copious black and white photographs and short text. The lack of information and a certain amount of wrong information means that it cannot be recommended. If this is the best the British can give us, the American writers have no competition.

Bike Touring — The Sierra Club Guide to Outings on Wheels, by Raymond Bridge, published by Sierra Club Cooks, USA, 1979, 456 pages, illustrated, price around \$9.50.

This is Raymond Bridge's latest book and as you would expect it is more comprehensive than his first bicycle camping book, *Freewheeling: The Bicycle Camping Book* of 1974. It is disappointing to

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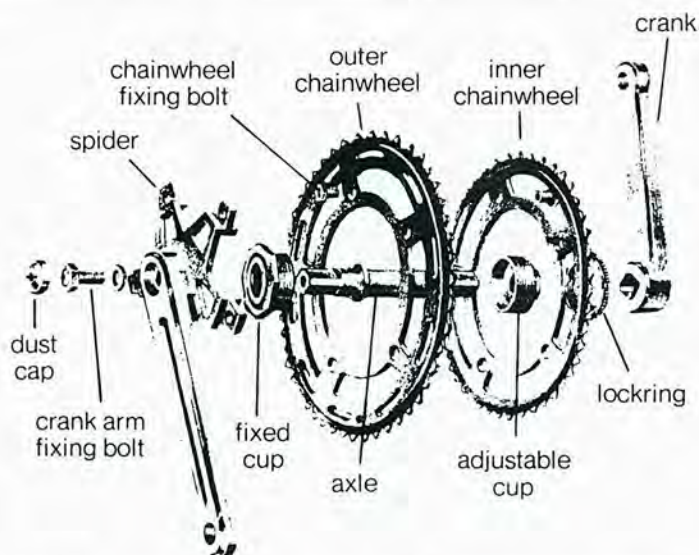
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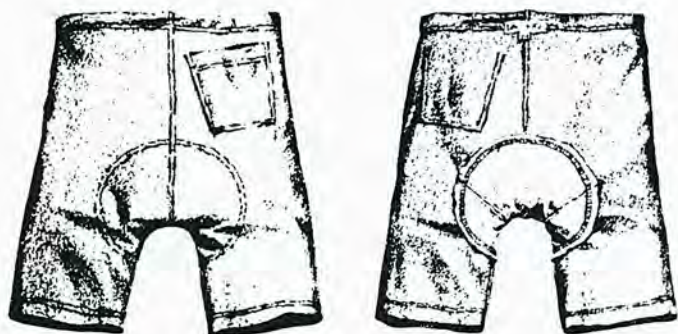
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10. A typical cotterless crankset. The hardened steel axle in the center is held in the bottom bracket by threaded cups. Ball bearings run between the machined races on the axle and the races on the insides of the cups. The lockring fits over the adjustable cup to hold it in position after the tightness of the bearings is adjusted. The crank arms mate with the square ends of the axle and are held in place by the fixing bolts. The chainwheels attach to the spider. A dust cap protects the threads on each of the crank arms.



24. Cycling shorts have legs that extend to the middle of the thighs so that the shorts do not ride up on the legs. A thick, soft chamois minimizes abrasion of the sensitive skin of the crotch. The chamois can be seen in the inside-out shorts pictured on the right.

New touring mag

A further sign of the resurgence in Bicycle Touring is the arrival on the scene of a new magazine for Melbourne's touring cyclists called *Trochos*. The magazine attempts to bring together and publicize the activities of that city's numerous touring clubs and if it achieves that purpose then all the better for touring generally. So far the first monthly issue is available and more are promised. The magazine is partly typeset and features touring articles, club news and calendars with notice of forthcoming

rides. In NSW the BINSW's Touring Calendar has been a huge success and the number of copies printed is usually insufficient to supply a growing interest in touring so it looks like *Trochos* is assured of a healthy future. We at *Freewheeling* certainly wish them success.

Trochos (Greek for wheel). A monthly magazine for Melbourne's Touring Cyclists is available through the clubs which support it or from the editor: Peter Innocent, 16 Kellaway Street, Maidstone 3012. Price 50c per copy.

see the cover illustration of his latest book reversed on the title page and thus moving the transmission to the left side of the bicycle.

Riding techniques, safety and training for day tours and longer trips make up chapter two and, believe it or not, that grand old fable ankling is recommended. Riding in traffic and the training section are very good as is the rest of this chapter.

Part two of the book is devoted to the touring machine, from the custom frame to accessories and this takes up some 40 per cent of this part. One chapter is given over to the drive train and its gearing section is the best exposition of this controversial subject I've ever seen. True, it was written in the light of Frank Berto's brilliant articles for *Bicycle* magazine (USA) over the past few years, but it is no mere carbon copy, quite a lot of original thought has gone into it. One can but hope and pray that other bicycling authors read it and alter the ill-informed gearing chapters which they have inflicted on us in the past. It should also be compulsory reading for bicycle manufacturers who still make many bicycles with incredibly bad gear ratios, which, as *Bicycling* pointed out, cost no less than good ratios.

Wheels and their components are covered in a chapter and they are followed by brakes, saddles, seat posts and handlebars. This is all soundly-based material, but the subjects are covered in more detail in such books as DeLong's *Guide to Bicycles* and *Bicycling* and *The Custom Bicycle* and its companion volume, *The Ten-Speed Bicycle*, both by Michael Kolin and Denise M. de la Rosa. Mind you, it will cost you at least \$50 for these three books. Accessories for the bike is followed by a brief section on maintenance and tools — good value here too.

Part three covers other equipment — seeing and being seen (lights etc), clothing (including helmets and Gore-Tex rain gear) are useful chapters. Following these are luggage and how to carry it and camping gear chapters. Both are excellent and much of the information is applicable here as well as being up to date.

Planning the tour, getting to the starting point, living on the road and camping on the tour are again quite useful in Australian conditions. Finally the appendices include learning to ride, building a wheel, reading lists and check lists. These and an index are the items of special interest to us down under.

To sum up, a very sophisticated book — very highly recommended to dedicated bicycle tourers and bicycle shops catering to their requirements. The beginning tourer would be advised to get Bridge's earlier book, *Freewheeling: The Bicycle Camping Book*.

Freewheeling

Australia's own bicycle magazine

Australia in the eighties is a rapidly changing place. The bicycle is now making its come back amid rising petrol costs and concern over a deteriorating urban environment and poor personal health. There are an estimated 2.5 million cyclists in this country and now there is a magazine which directs itself at this growing population: Freewheeling. The publishers of Freewheeling believe that bicycling will only become properly re-established if there is a strong and regular riding population to support it.

In order to encourage this we pack each issue with articles which inform as well as entertain. In each issue you will find authoritative articles on the history of cycling, touring guides, maintenance and do-it-yourself pieces, political news, and record of important happenings in the non competitive cycling world. Ask for a copy at your newsagent or bicycle shop or take advantage of the subscription offer below.



Back Issues

Freewheeling is the bicycle info magazine. Each issue is filled with guides, do-it-yourself articles, historical pieces and resource material. If you have just discovered a current copy then you will probably want to get hold of back issues as they all contain much valuable information. Use the form below to order your Freewheeling back issues for delivery to your home address.

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Use the order form provided (or a photocopy if you don't wish to cut your magazine) and send it with your cheque/money order to *Freewheeling*. Please allow four weeks for delivery. The reverse side of the order form is for *Freewheeling* subscriptions and back issues. Don't forget to fill out both sides fully if you are ordering magazines as well as goods from the touring shop.

New title

The Bicycle and the Bush
by Jim Fitzpatrick.

Readers of this magazine will recognise the author of this just-released book. Jim Fitzpatrick has researched the use of the bicycle and the part it played in the Australian bush. A must for bicycle history buffs of all ages. Discover your roots with this wonderful book.

Oxford University Press. Hard cover. \$19.95. Postage \$2.70.

Bicycles

Richard's Bicycle Book
by Richard Ballantine.

This handy book has been completely revised and is now a world best seller. Easily recommended as the bicycle book to own and use. Everything from choosing your dream bicycle to traffic jamming to maintenance, this book has it.

Pan Paperback. \$6.95. Postage \$0.80.

The Penguin Book of the Bicycle
by Gray and Watson.

A well-research and written general book on bicycles and bicycling. English in origin but universal in outlook. Good illustrations and lots of relevant information for the modern urban cyclist. The history sections are good reading.

Penguin Paperback \$4.95. Postage \$0.80.

Bicycles

all about them



Bicycles: all about them.

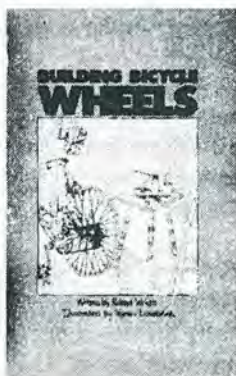
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Puffin, paperback \$1.95. Postage \$0.80

Travelling by Bike
by various authors.

A collection of articles/chapters by some now well-known bicycle tourers from the USA. Good solid info and lots of helpful hints and ideas. Some sections may seem a little dated but the overall message of this book will never grow old. A useful reference for any serious bicycle traveller.

World publications. Paperback \$2.50. Postage \$0.80.



HOW TO FIX YOUR BICYCLE



by HELEN GARVY
drawings by T WHITE

Building Bicycle Wheels
by Robert Wright.

Small in size but large in content, this book describes clearly the method and theory of building bicycle wheels. The average amount of wheel building and truing costs saved in a year could easily pay for this book a few times over. Line drawings and step by step text make this book easy to follow and enjoy. There is no excuse for the mystique of wheel lacing and truing. This book has the answers.

World Books. Paperback \$2.50. Postage \$0.50.

Sutherland's Spoke Calculator

Use this slide rule-type calculator to work out spoke lengths for the various cross patterns, rim and hub types. An ideal companion to the above book.

B&W print on card, diecut. \$5.25. Postage \$0.40.

Bicycle Frames
by Joe Kossack.

A companion book to the Bicycle Wheel book. This book is a brief description of the various types of frames and their construction. A must for the person who wants to know their machine.

World Books. Paperback \$2.50. Postage \$0.50.

How to Fix Your Bicycle
by Helen Garvey.

A wonderful little book. Ms Garvey's descriptions are accurate with a touch of humour. A good beginners book, especially valuable for ten-speed owners. Illustrated with line drawings.

Paperback \$2.50. Postage \$0.50.

Bicycles: How they work and How to Fix them — Rand McNally Publishers.

This technical-type manual is a general guide to bicycle maintenance. The text is especially supportive of novice repairers. Tools are well described as are some basic bicycle parts and jargon. Plenty of exploded diagrams and helpful information. Complicated manoeuvres are well illustrated with captioned photograph.

Paperback, magazine dimensions, cheap price \$2.75. Postage \$0.80.

Camping

Freewheeling: The Bicycle Camping Book
by Raymond Bridge.

Until recently the only comprehensive book on touring and cycle camping available. Its only drawback is that it is written for foreign conditions. Still it has lots and lots of ideas and info crammed between its covers. See review in this issue.

Paperback \$4.50. Postage \$0.80.

Bushwalking and Camping
by Paddy Pallin.

A new and up to date edition of Australia's best and longest selling book on outdoor pursuits. Though a cycle touring section is absent it is still a mine of information on basic camping techniques. Great stuff Paddy!

Paperback \$2.50. Postage \$0.50.

The One Burner Gourmet

A cookbook for campers especially written for the camp stove. Lots of recipes and helpful details which prove that you don't need to eat bland camp food when you are away from those five-star restaurants.

Paperback \$7.40. Postage \$0.80.

Knots and Splices
by Jeff Toghil.

This book's illustrated knot craft makes the possibility of losing your tent in a strong wind a remote chance. A popular book especially for would-be serious campers.

Paperback \$1.95. Postage \$0.50.

Bicycling Notes

A cycle touring log book which help you keep tour notes from getting mislaid and muddled up.

Softcover \$3.60. Postage \$0.80.

The Blue Mountains — A guide for bicyclists — by Jim Smith.

We are pleased to offer this excellent little book to our readers. It contains details of tours of varying lengths and grades in the Blue Mountains area as well as background info and advice.

Paperback \$2.50. Postage \$0.40.

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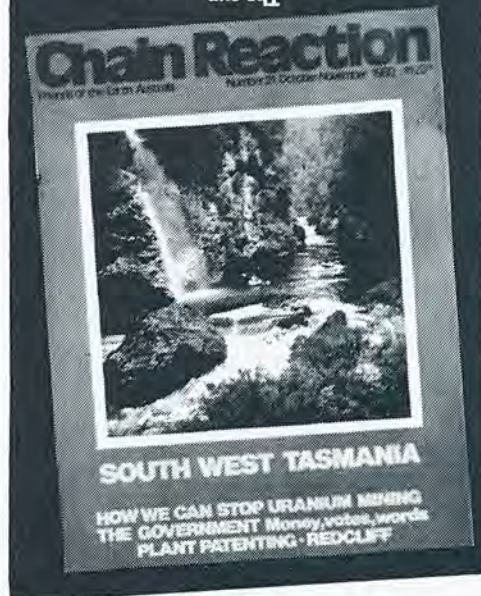
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